

THE  
TRAVELLERS'  
MEDICAL GUIDE

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BY A PHYSICIAN.

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THE TRAVELLERS'

# MEDICAL GUIDE.

A BRIEF MANUAL FOR EXPLORERS, MISSIONARIES,  
COLONISTS AND SHIP-CAPTAINS.

BY A PHYSICIAN.

*SECOND EDITION.*

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## PREFACE.

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THE object of this pamphlet is to point out what are the principal dangers that beset the European in Tropical climates, and how best to avoid them; to describe the disorders and diseases there prevalent, and to shew what can be done in the way of proper treatment while awaiting or beyond the reach of skilled advice. Only the briefest statements accord with the design, but it is hoped that clearness is not sacrificed to brevity.





# INDEX.

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	PAGE.
INTRODUCTORY . . . . .	I
CLINICAL THERMOMETER . . . . .	I
HYPODERMIC SYRINGE . . . . .	2
ENEMA SYRINGE . . . . .	3
MEDICINE DROPPER . . . . .	4
MEDICINE CHEST . . . . .	4
GENERAL HINTS . . . . .	5
DISORDERS AND DISEASES OF THE ALI-	
MENTARY CANAL—	
INDIGESTION . . . . .	9
DIARRHŒA . . . . .	11
DYSENTERY . . . . .	13
CHOLERA . . . . .	17
FEVERS—	
INTERMITTENT . . . . .	22
REMITTENT . . . . .	25
TYPHOID . . . . .	30
HEAT . . . . .	36
SUNSTROKE . . . . .	36
RESULTS OF EXPOSURE . . . . .	38
SNAKE BITES . . . . .	39
INSECT BITES . . . . .	40
TABLE OF TEMPERATURE . . . . .	41
APPENDIX . . . . .	43



# TABLE OF CONTENTS.

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## CHAPTER I.

### INTRODUCTORY.

#### REQUISITES.

- 1 Clinical Thermometer :  
Purpose ; Construction ; Method of use ..... pp. 1, 2
- 2 Hypodermic Syringe :  
When required ; Construction ; Apparatus ; Care of ; Caution ;  
Points of insertion safest ; Method of use ; Painless injection ;  
Air bubbles ; Solutions ; Caution ; Adult dose always here given  
pp. 2, 3
- 3 Eneina Syringe :  
Caution ; Method of use ; How to cleanse after use ; When useful  
pp. 3, 4
- 4 Medicine Dropper :  
Purpose of ; How filled and used ..... p. 4
- 5 Medicine Chest :  
Construction ; Contents ..... p. 4

## CHAPTER II.

### GENERAL HINTS.

Changes of habit necessary ; Physical labour ; Shade necessary ; Hours for travel ; Dress ; Flannel belt ; Dangers of draught ; Bedclothing ; Head-wear ; Food : No fats or oils ; Meats ; Dietary ; Caution ; Fruits ; Milk and eggs ; Peptonisation ; Coffee ; Tea ; Milk ; Water : Cautions ; Acidulated ; Drinks ; Alcohol ; a Good and abundant nourishment necessary ; Dwellings ; Drainage...pp. 5-8.

## CHAPTER III.

### DISORDERS AND DISEASES OF THE ALIMENTARY CANAL.

- Indigestion : Causes of acute ; Remedies ; Chronic : Symptoms ; Remedies ; Undigested food in passages ; Acid stomach  
pp. 9-11
- Diarrhœa : Treatment ; Diet ; Laxatives ; Astringents ; Opiates ; Chronic form ; Signs ; Diet ; Medicines ; Absence of bile from the stools ; Indications for Mercurials ; Pain ; " stools " pp. 11-13
- Dysentery : Causes ; Symptoms ; Treatment ; Rest ; Opiate Enemata ; Mercurials ; Favourable signs ; Irritable rectum ; Chronic form ; Relapse ..... pp. 13-17

- Cholera : Symptoms ; Diarrhœa ; Choleraic stools ; Nausea ; Cramp ; Collapse ; Treatment ; Preventive ; Special measures ; Hot foods and drinks ; Predigestion of foods ; Alcoholic stimulants ; Drinks ; Medicines ; Nausea and Cramps ; Danger of abusing opiates ; Consequences ; Simple Cholera or Choleraic Diarrhœa  
pp. 17-21

## CHAPTER IV.

## FEVERS.—ORIGIN—CHARACTERISTICS.

- Intermittent Fever or Ague : Premonitions ; Symptoms ; Cold, hot and sweating stages ; Varieties of ; Body temperature in (*see* Table in Appendix) ; Preventive means ; Pilocarpine ; Palliatives ; Remedies : Emetics ; Laxatives ; Febrifuges ; Curative means  
pp. 22-25
- Remittent Fever : Symptoms ; Favourable signs ; Treatment ; Mercurials ; “Livingstone’s Rousers” ; Palliatives ; Cool baths ; Remedies : Quinine ; Warburg’s Tincture ; Sequelæ ; Treatment : Caffein ; Morphine ; Atropin ; Dropsy ; Signs of insufficient action of kidneys ; Caffein as a diuretic ; Lemonade ; Chronicity ; Hepatic and splenic enlargement ..... pp. 25-30
- Typhoid Fever : Symptoms ; Range of heat ; Typhoid state ; Dangers ; Treatment ; Caution ; Laxatives ; Febrifuges ; Caution ; Restlessness ; Delirium ; Diarrhœa ; Paralysis of bladder ; Need of Catheter ; Hæmorrhage ; Tannin ; Quinine ; Food ; Beverages ; Cautions as to solid food and fruits ; Alcohols, when indicated ; Nutrient enemata ; Temperature of Room ..... pp. 30-35

## CHAPTER V.

## SUNSTROKE.

- Heat Exhaustion : Treatment .....p. 36, 37
- Heat Fever : Treatment : Caution as to carrying it too far ; Convulsions ; Danger to drinkers of alcohol ; How to distinguish alcoholic insensibility from sunstroke of the dangerous sort  
pp. 36, 37

## CHAPTER VI.

- Results of Exposure .....pp. 38, 39

## CHAPTER VII.

## SNAKE BITES.

- Venomous snakes ; non-venomous ; Treatment ; Ligature ; Hypodermic injections ; Stimulants ; Insect bites .....pp. 39, 40

## CHAPTER I. INTRODUCTORY.

### REQUISITES.

(1) **Clinical Thermometer.**—PURPOSE—CONSTRUCTION—METHOD OF USE.—The Self-registering Clinical Thermometer is a delicate instrument, intended to show the range of temperature of the body in febrile states, and is capable *in judicious hands*, of affording valuable information respecting the kind of fever present, its severity, and the probable outcome, while it to a certain extent exhibits the effect of remedies and determines the period of their usefulness. The oncome of consumption can usually be long foretold with the aid of the thermometer by the daily slight elevation of temperature. It is important, then, to master the principles involved in its construction and use, and to possess one or two thermometers of undoubted excellence.

The range of this instrument is usually from  $96^{\circ}$  Fahr. to  $110^{\circ}$ , these being the limits between which the bodily temperature may rise and fall in disease, *its natural point being from  $98\frac{1}{2}^{\circ}$  to  $99^{\circ}$  in health.*

A peculiarity of construction consists in the separation of a portion of the mercurial column, *which portion*, when raised by an excessive degree of heat, *remains at the height indicated until shaken down for the next observation.*

In order, then, to prepare it for use, when the *upper edge of the detached register is above  $98\frac{1}{2}^{\circ}$* , grasp the instrument in the fingers of the right hand as one does a pen, *but more firmly*, and then smartly strike the wrist upon the clenched fist of the left hand, examining the register after each blow *until it has been shaken below  $96^{\circ}$ .*

It may then be placed in the armpit, *the bulb being everywhere in contact with the skin (i.e., with no clothing intervening)*, and retained there for *at least five minutes*. During all this time it is well to *hold the arm close to the side*, so that air shall be excluded as far as possible. When

taken away for examination, it is well to make a record of the heat shewn, and the hour of observation (*see* Appendix) in a table prepared for the purpose, so that the comparative knowledge thus gained may prove available for diagnosis, prognosis, and treatment.

It should, perhaps, be added, that placing the thermometer under the tongue is quite free from the likelihood of error, the patient being told to close the lips but not the teeth. In young infants the temperature is commonly taken in the rectum. The temperature varies a trifle in different parts of the body.

When the temperature has been taken, always wash the thermometer *in cold water*, and having carefully shaken down the register below  $98\frac{1}{2}^{\circ}$ , *put the instrument in its case at once.\**

**(2) Hypodermic Syringe—When required—Construction—Apparatus—Care of.**—The “Hypodermic Syringe” is an instrument intended for the immediate introduction of medicines under the skin, in certain cases where rapidity and certainty of action are desirable, and where the stomach refuses to accept or retain drugs, or is so inactive that their absorption is very doubtful. It is graduated either upon the barrel or stem to shew how many “minims” (60 minims = one drachm) are contained, or have been injected when in use. There are included in the Burroughs Hypodermic Pocket Case two or more hollow needles, and a bundle of wires, one of which should always be thrust through and kept within each needle to prevent clogging. A drop of oil upon the piston of the syringe every two or three weeks, if not in use, conduces much to its perfect action when suddenly required.

**Caution.**—The parts into which the injection is to be given may vary, but it is well to *avoid localities where veins are numerous and large, since the introduction of medicaments or air into a vein is often a serious, and sometimes a fatal, accident.*

**Points for Insertion.**—A very safe place is to be found above the knee over the front of the thigh, or behind and above the elbow over the back of the arm, or over the stomach.

**Method of use.**—The syringe should be first tested with pure (preferably *boiled*) water, and then filled with water in

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\* These expensive and valuable instruments exhibit a strange propensity to fall and break, if left for only a moment unguarded.

which the hypodermic Tabloid required has been dissolved. Having *pinched up the skin with the thumb and fore-finger of the left hand*, the needle should be now passed *parallel to the surface, into the textures that have been elevated, to the extent of three-quarters of its length*. Withdraw then for a *quarter of an inch only*, press the stem and piston slowly yet firmly "home," removing the instrument with a quick motion and placing the forefinger of the left hand immediately upon the puncture, to prevent any leakage of the dose ; one minute will usually suffice, when the part may be left, secure from pressure, without a dressing of any kind.

**Painless Injection.**—By rubbing the part for a moment or two, and then pinching up a goodly portion of the skin between finger and thumb, the syringe may be introduced without pain. When the needle has been inserted, the skin should no longer be pinched, as pinching at the time that the fluid is being injected causes pain. •

**Air Bubbles.**—*The last thing before injecting*, the syringe should be held with the needle upward, when the air bubbles will rise ; the piston should then be gradually pushed in until the air bubbles have all been expelled, and only the liquid exudes at the needle's point.

**Solutions—Caution**—The solutions for such medication are best prepared at each time of using, as they inevitably spoil in keeping. Therefore the *Soluble Hypodermic Tabloids* preserved in glass tubes fitted into their "*Hypodermic Case*," are invaluable.

**Doses, always for Adult.**—It may well be noted that the dose of medicines used *hypodermatically*, is *considerably lower than that customary for administration by the stomach* ; furthermore, that *all doses given in these pages are for the adult*. In the Hypodermic Tabloids the doses are all correct.

**(3) Enema Syringe—Caution—Way to Use.**—The "enema syringe" may be properly of the simplest form, of which the "bottle" shape is a type. This consists of an elastic rubber reservoir and rectum tube, which latter *must be oiled before introduction*. Clasp the collapsed bulb in the hand, and holding the tube *well below the surface of the*

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\* The use of imperfectly dissolved medicines, or of those requiring a solvent, and especially of solutions which have "stood," often produces abscesses at the site of puncture, and even graver results when the constitution of the patient is in an unhealthy state.



*liquid to be injected*, allow the bulb slowly to expand, filling itself to the utmost and leaving no room for air. When the tube is introduced, compression of the bulb in a slow and gradual manner will ensure expulsion of its contents into the rectum.

Other kinds of syringes for this purpose have *valves*, which are apt to become clogged, or even lost by careless handling during the cleaning process.

**How Cleansed.**—The instrument should always *be carefully cleansed after using*, by filling it repeatedly with hot water, which should be expelled with force.

**Cases where useful.**—An enema syringe is of great service in certain cases of constipation, to assist remedies given by the mouth; in dysentery, for the local administration of soothing remedies; and for nourishing a patient by the rectum, when there are reasons for keeping the stomach at rest.

**(4) Medicine Dropper.**—The “medicine dropper” is a useful device for the accurate measuring of fluid medicines. It is filled by compressing the bulb between finger and thumb, and allowing it slowly to expand after the point is immersed in the medicine. It may then be emptied drop by drop into water, etc., and this stirred before taking.

**(5) Medicine Chest—Construction.**—The “medicine chest” *should be made of tin* well japanned, or of leather, since the extremes of heat and the dampness of the Tropics will inevitably warp and split one constructed of wood. There are medicine chests prepared in perfect keeping with this guide, which are durable, light, serviceable, compact and conveniently arranged for all requisites. (See appendix, p. 52.)

**Contents.**—The medicine chest should afford room not only for medicines, but for the requisites already described, some boxes of Rigollot’s mustard leaves, etc., and surgical appliances, a list of which may be found in the Appendix.

The great liability to breakage, and consequent loss, should lead one to discard *fluid medicines* as far as possible; while, for the sake of portability, compactness, and exactness of dosage, nothing can excel the “Tabloids” of compressed drugs.\*

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\* A descriptive list of the medicines recommended in these pages with brief notes upon their uses, will be found in the Appendix.



## CHAPTER II.

### GENERAL HINTS

**Changes of Habit Necessary.**—It should be impressed upon the mind that a tropical climate demands of the European a decided change in his habits of work, his dress, food, drink and dwelling arrangements.

**Physical Labour.**—Ordinarily the same amount of exercise or physical labour cannot be safely performed within the same period of time, nor at the same hours, as in Europe, without entailing serious and unwonted exhaustion—a state which renders one more immediately susceptible to morbid climatic influences.

**Shade Necessary.**—Whatever physical labour is undertaken must be such as can be performed *under shade*, whether of trees, an awning or double umbrella.

**Hours for Travel.**—All journeys must be undertaken between the hours of 5.30 a.m. and 11 a.m. (Stanley), liberal supplies of *proper* food provided, and an adequate amount of rest taken in order to keep up the strength.

The blaze of the mid-day sun must be avoided on every occasion, and at all times the head and neck must be *especially* protected.

**Dress.**—The skin in tropical climates is in such constant activity, that one's garments often reek with perspiration, even when the person is at rest. It is necessary that the greatest caution should be exercised, lest a too rapid evaporation of this moisture from the body bring about a *chill*, which is almost sure to be followed by a corresponding fever of more or less severity (Stanley).

As a protective measure, the underclothing, and, generally speaking, *all clothing*, should be woollen.

**Flannel Belt.**—It is of much importance in view of the prevalence of diarrhoea and dysentery, that the abdominal organs should be specially protected by a flannel belt, surrounding the body, *and worn day and night*.

**Dangers of Draughts.**—An extra woollen garment should always be at hand to throw over the shoulders if wet with perspiration, and exposed to winds or draughts, which, at all hours under such circumstances, *are most dangerous foes* (Stanley).

The transitions of temperature from afternoon to evening are very great, and it is advisable when circumstances permit, to change the clothing at sunset.

**Bedclothing.**—Woollen blankets at night are a prime necessity, one of which at least should reach the shoulders.

**Head-wear.**—By day, the ordinary helmet with cape—which may be kept wet if travelling under the sun's rays—or, better still, the “Congo Cap” (Stanley's) should protect the head.

**Food.**—The very pronounced tendency to exhaustion after apparently trivial exertion, indicates a necessity for *an ample supply of easily digestible foods.*

**No fats or oils.**—Bearing in mind that there is a lessened need for “heat-producing” foods, it is not well to indulge in fats or oils, especially as these make strong demands upon the liver and other digestive organs, which are liable to many disorders in tropical climates.

**Meats.**—Nor is even lean meat so necessary as in temperate zones, since the process of utilising and excreting it, etc., throws too heavy a burden upon the liver and kidneys.

Mr. Stanley commends the flesh of the native goat as being more acceptable than the tinned beef and mutton which are usually supplied on the coasts of Africa.

**Dietary.**—Mr. Stanley recommends the early Continental breakfast of coffee or pure tea with condensed or goat's milk, with good bread (rather than biscuit) if it can be obtained; at 11 a.m., a *déjeuner* of *lean meat*, or fish and vegetables, as rice, lentils, carrots, onions, or native greens—dry bread, and tea with milk; at 6.30 p.m., a “prudent dinner” of boiled fish, roast fowl, roast mutton, a change of vegetables, dry bread, rice, sago, tapioca or macaroni pudding, and possibly a little “weak Claret, or two ounces of Madeira with water, or an equal amount of Champagne and water.”

**Caution.**—The coarser grains should be avoided when the least tendency to diarrhoea or dysentery is present.

**Fruits.**—Fruits with abundant seeds and hard skins are always objectionable. Oranges, mangoes, ripe bananas, guavas and papaws, and the *juice only* of pineapples, may

be taken *sparingly in early morning,—never later in the day* (Stanley). *Avoid them entirely in sickness, as being specially liable to cause indigestion, and to provoke irritation of the bowels.*

**Milk and Eggs.**—Milk and Eggs are fairly safe and most nutritious aliments, and may enter into preparations made of grains, with great advantage.

**Peptonisation.**—*It is always wise to scald milk before taking it, and during invalidism or attacks of fever it is often essential to “peptonise” milk to ensure its digestion and absorption. “This is to be accomplished by adding one Zymine Peptonising Powder (Fairchild) to a pint of milk diluted with  $\frac{1}{4}$ -pint of pure cold water. By setting the mixture in water, as hot as the hand can bear, it will be ready for use in about 20 minutes. When the milk is not intended for immediate use, the process of peptonisation (which if prolonged will result in bitterness) may be arrested by bringing the fluid to a quick boil, when it will remain for some time in a sweet and palatable condition.”*

In the progress of certain diseases of the alimentary canal, this *artificial predigestion of milk can scarcely be over-estimated* as a factor in successful treatment, and many a case of tropical dysentery, or even of the dysentery and typhoid fever of temperate climates, has been lost for lack of such a food, bland, unirritating and perfectly assimilable as it is.

**Coffee—Tea—Milk.**—Coffee, tea (pure and good) and milk must and *will* compensate for abstinence from alcohol.

**Water—Cautions—Acidulated.**—*Waters should always be boiled before using as a beverage. It should never be taken from swamps, should be filtered\* if possible as well as boiled, and can be made more palatable by dissolving a teaspoonful of Citric Acid in each glass, and then sweetening.†*

**Drinks—Alcohol.**—Alcoholic beverages, *as such*, had better be banished from the stores, *or reserved entirely for medicinal purposes.* If taken at all, use only claret or

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\* Maignen's “Filtre Rapide” has won a good reputation in Egypt.

† It is a great and mischievous error to suppose as even so experienced a traveller as Rob Roy seems to do (*vide* Rob Roy on the Jordan) that a spoonful of brandy added to impure water has any tendency to neutralize its noxious properties. It has no such effect.

Madeira, as directed by Mr. Stanley, *with dinner, and "never by daylight,"* when the heat of the sun doubles the effect of alcohol upon the brain, and "emboldens one with a false courage which may be fatal."

**Good and Abundant Nourishment Necessary.**—It should be repeated that, as tropical climates are debilitating, and their diseases especially tend to an impoverishment of the blood and to states of exceeding nervous or vital depression, it is of the greatest importance to sustain the physical powers both in health and disease by *proper food*, the neglect of which has alone cost many a valuable life (Prosser James).

**Dwellings.**—The dwellings, temporary or permanent, should be situated to the *windward of morasses or rivers*, regarding prevalent air currents. They should not be placed in situations exposed to cold bleak winds, as between adjacent mountain ranges, or in deep hollows where there is little ventilation, and the rays of the sun beat down with redoubled violence. A moderate elevation upon wide plateaus, where there are pleasant currents of air without confined or rushing winds, or a hot and stagnant atmosphere has proven healthiest.

"The lower story should be clear of the ground, unless the floor is made impervious to damp by cement or asphalt. On a grassy plain the floor of one's living room should be *at least twelve feet above the ground*" (Stanley).

**Drainage.**—Good drainage is of great importance, and its relation to the water supply must be accurately determined. If rain water be used for drinking purposes, its receiving reservoirs must be kept scrupulously clean and free from all organic matters (dead leaves, grasses, etc.), and should never be below the surface-level. Though water be taken from a spring or stream, it should *nevertheless be boiled*, if there is any possibility of contamination at the source or in the course of the spring.

In districts where ague is prevalent it is very important not to be abroad but to remain indoors during the night and early morning hours, say from 6 p.m. to 5 a.m., as it is during these hours that the ague miasm is most deadly. The traveller should make it a rule never to stir out in the early morning on an empty stomach. He must at least take a cup of hot coffee if he cannot breakfast.

## CHAPTER III.

DISORDERS AND DISEASES OF THE  
ALIMENTARY CANAL.

## INDIGESTION.

Indigestion may be "acute" (sudden and temporary), or "chronic" (more or less continuous and recurrent).

**Causes of Acute.**—The acute form arises from imperfectly masticated, uncooked or poorly-prepared food, or from full meals *taken when chilled or exhausted*.

The symptoms are discomfort or pain in the region of the stomach, more or less intermittent and spasmodic, experienced usually within two hours after eating, attended often by much flatulence, and eructations of a hot sour fluid, sometimes by giddiness and headache.

**Remedies.**—The treatment consists in emptying the stomach, by inducing vomiting. The finger in the throat, a glass of warm water with a teaspoonful of mustard stirred in it, or a dose of 15 grains of *Ipecacuanha* (or 3 5-gr. tabloids crushed in water), repeated if necessary, every 20 minutes, will secure this end. (The matters vomited should always be inspected in order to learn what in future to avoid.)

A mustard leaf dipped in warm water and applied to the painful region, and kept there *till the skin is decidedly reddened*, brings often great relief. But if pain still lingers, or recurs in the lower part of abdomen, adopt means to secure the rapid clearance of all offending matters from the bowel. The laxatives should be of a kind which do not disturb the stomach, for after the organ has once been cleared it should be allowed perfect rest for a time. A five grain Calomel Tabloid is excellent, as are also the "Vegetable Laxative Tabloids," which cannot salivate. One of the most effective of all known agents for pain in the stomach is Nux Vomica. If taken early it will almost always relieve the pain. Two grains of opium are effective, but have unpleasant after-effects. After these



attacks it is as well to take a cathartic, preferably one or two of the Comp. Cathartic Tabloids, *i.e.*, where no previous laxative has been given. If flatulence is a common symptom, take the Compressed Soda-Mint Tabloids. As long as there is any tenderness over the stomach, the diet should be peptonised with Fairchild's Zymine, for solid food will but tend to aggravate matters. Bits of solid cod fish, dried beef—both well masticated—and small draughts of cold black coffee may be the first step toward solid food after a bad attack. The Peptonic Tablets should be taken in doses of two or three after each meal, and the Nux Vomica, 10 drops in a wineglass of water, three times daily for some time.

### CHRONIC INDIGESTION.

The chronic form of *Indigestion* is due to the same causes (above-mentioned) repeated frequently,—to the impoverishment of the blood and consequent debility of the whole digestive apparatus, the result of long or frequent exposures to malarious influences, or to imperfect recovery from acute and exhausting diseases or to continued indiscretion.

**Symptoms.**—The symptoms are not unlike those already detailed for the acute form, but are less severe. Sometimes they follow the meals at longer intervals, at others not, and are at times accompanied by diarrhoea alternating with constipation. The tongue is usually coated and “sticky,” the head uncomfortable, and the mental faculties are depressed. In common parlance the chronic dyspeptic always feels the presence of his stomach. Generally speaking a *Chronic* disease is one that lasts more than six weeks.

**Remedial Means.**—Remedial measures must begin with simplifying the diet, taking food regularly but often, and in smaller quantities than usual, using meat only in form of strained broths, making the grains with milk into gruels, or taking peptonised milk (see page 7) alone, or with egg custards. Plain wheat bread, *if good*, toast or biscuit may be added.\*

Vegetables and condiments should be discarded, except where there are *idiosyncrasies*.

**Undigested Food in the Stools.**—If the stools are loose and contain portions of undigested food, one or two Peptonic

\* The writer knew a physician who for forty years lived and thrived upon an exclusive diet of chocolate prepared with milk, and baked potatoes. Thus only could he free himself from this *bête noir*.

Tablets should be swallowed whole after each meal. When nausea and diarrhœa are present, the Bismuth Tabloids should also be taken at the same time. If debility be prominent, conjoin with this treatment a Tabloid of Quinine, Arsenic and Strychnine; or, the milder but very useful tonic, Bismuth Tabloids,\* one just before each meal, may be taken with the Peptonic Tablets, and ten drops of Nux Vomica in water, after food three times a day until the strength be improved, when two Tabloids each day will prove sufficient for progress. When symptoms have disappeared, one Peptonic Tablet after the largest daily meal, for one or two weeks, will be advisable.

**Acid Stomach.**—To correct acidity of the stomach alone, two Tabloids of Soda-Mint taken when it occurs, will prove very efficient. To cure, take 5 drops dilute Muriatic Acid in a wine-glass of water, before meals, with Quinine and Nux Vomica.

## DIARRHŒA.

Diarrhœa from simple weakness or irritability of the bowels, or from indigestion, etc., may be quite obstinate. The stools are "biliary," too loose and frequent.

**Treatment—Diet.**—Diet must exclude everything that appears in the passages as undigested, and must be simplified as in case of the indigestions.

**Laxatives—Astringents—Opiumes.**—If the diarrhœa come on suddenly, the bowels should be cleared of all irritating matters by a laxative, such as a tablespoonful of castor oil and lemon juice, or a "*Laxative*" *Tabloid*. Afterward, if still persistent, a mild opiate and astringent *to simply check* (not "bind") the bowels will be of service. Such a combination is Lead and Opium,—one or two tabloids to be taken *after each loose passage*. The remedy should be discontinued when the stools attain consistency and form. If not successful, take one Tabloid of Opium and Camphor after each *loose* movement, under the same conditions. *Once in three hours is usually as often as the opium is requirea.*

## CHRONIC DIARRHŒA.

Frequent attacks of Diarrhœa show a tendency in the disorder to become chronic, and instead of being evidence

\* The stools will always be blackened by Bismuth or Iron. This is of no consequence.

of functional disorder merely, may indicate a state of congestion or even of inflammation. They are often indicative of the presence of foreign matter in the intestine, keeping up the irritation. The cause should be carefully sought out and remedied. A full dose of Castor Oil with Opium has often cured chronic diarrhœa.

**Signs.**—The stools in chronic diarrhœa are frequent, and may be in part solid, portions being covered with a film of mucus, and in part fluid, dark, offensive, and at times spotted with blood. Spasmodic pain precedes a discharge, and there is general abdominal tenderness. When this disease shows a tendency to become dysenteric, mucus appears in gelatinous masses or shreds, scattered through the stool and mixed with blood.

**Diet.**—In order to successfully master this disease, *the most thorough and continued caution must be observed, a single error of diet sometimes undoing the work of weeks.*

Vegetables, fruit and jams, must be rigidly excluded, and *peptonized milk* should form the chief diet until progress be assured.

The first changes made when this is observed, may consist in the addition of flour to make a thin gruel, or of corn-starch, or arrowroot. A little nutmeg or spice will often add much to the palatability of these preparations. The white of an egg, uncooked, *and stirred* (not beaten) in water, sweetened and fortified with a dessert-spoonful of spiced brandy, makes an acceptable variety, and may be taken three or four times a day in states of debility. Peptonised foods are of the very greatest utility.

*A recumbent position, largely maintained,* goes far toward alleviating and cutting short this disease, as does abstraction from all sources of worryment.

**Medicines.**—When indigestion is made manifest by the stools, two Peptonic Tablets or Pepsin Tabloids may be taken three times daily.

**Absence of Bile from Stools—Indication for Mercurials—Pain.**—When the passages are clay-coloured, possess no natural fæcal odour, *are semi-solid*, and sour-smelling, take a grain of Calomel and half a grain of Ipecac. every night till the stools resume a yellowish or brownish appearance. When pain is decided, take (in addition to the remedies already mentioned) one Bismuth and



one Opium Tabloid every two, three or four hours until it abate. This last remedy is not commonly needed where proper care is taken to avoid indigestible food. The Lead and Opium Tablets are excellent, after the mercurial has done its work, if the movements remain too loose and occur too often.

**“Milk Stools.”**—It should be known that an exclusive milk diet produces in the adult drab-coloured stools, which are usually homogeneous and pasty, and if mixed with water will stain it yellow.

This would not be an indication for Calomel, which restores the biliary and glandular secretions when lacking.

### DYSENTERY.

Dysentery is an inflammatory disease of the large intestine. (The large intestine extends from near the right groin to the liver, thence transversely across the abdomen, and thence downward to the rectum). It is indicated by frequent and painful calls to stool, the act being attended by much straining and the extrusion of small motions consisting chiefly of mucus mixed with blood. If severe, the disease may be accompanied by fever, but the range is rarely above  $102^{\circ}$ , unless complicated with decided malarial symptoms. The inflammation is always most marked in the rectum and descending part of the large intestine.

**Causes.**—Dysentery is either *epidemic* or *sporadic*. It may follow, as their consequence, the disorders considered in previous pages, or arise from prolonged constipation, undue exposure to the sun, to cold or wet, or to the chilly air of night after exhaustive fatigue. It not infrequently depends upon malarious poison, and is sometimes coincident with or follows an attack of malarial fever. Commonly, ulcers are formed in the bowel, the whole gut being lined with them. In healing, these sometimes constrict the bowel, and produce a permanent stricture, with constipation.

**Symptoms.**—Both forms of dysentery begin with diarrhoea, after constipation or irregular stools. The patient is listless and weak. In from three to five days the diarrhoea becomes worse. There are rigors and abdominal pain. The desire to go to stool is irresistible, and the pain and burning about the rectum and anus are very intense.

The patient wants to be constantly on the vessel, strains himself extremely, but usually passes only blood, mucus, charred-looking fragments, "little white clumps, or round bits looking like minced raw meat." No relief is obtained by the passage of these motions, pain keeps up, and this state of things may last for six or eight days, the symptoms being better in the morning and worse at night. The pain may increase, the stools be passed involuntarily, and the patient sink and die. In a mild case recovery should be complete in three weeks, and in about two months in one ordinarily severe. The mortality in epidemics is 40 or 50 per cent., but sporadic cases as a rule recover.

Inactivity of the liver and glandular apparatus is recognised by the absence of ordinary biliary (feculent) matters from the stools.

**Treatment—Rest.**—Recumbency, continued until the passages become natural, and mucus and blood have disappeared, is absolutely essential.

If the attack have been sudden, with prior constipation, the whole bowel should be cleared by two table-spoonfuls of castor oil, with sufficient lemon juice to cover taste. One Tabloid of Morphine ( $\frac{1}{8}$  gr.) may be given simultaneously if pain is severe. If diarrhoea have preceded the onset, the cathartic may be omitted, and treatment with Ipecacuanha begun.

Ipecacuanha should be given in doses of from 20 to 40 grains (4 to 8 tabloids crushed in water) every four hours, washed down with a little milk. The first doses may be vomited, but rarely if a Tabloid of Opium (1 gr.) have been given 30 minutes before; tolerance, however, is soon established, and the full repeated doses bring about copious biliary (feculent) stools which clear away offending matters, and replace the morbid secretions by others that are normal and unirritating. When ipecacuanha has accomplished this much, it has done all it can do, and should be discontinued. Rest and strict attention to hygiene and diet will usually complete the cure, when the disease is not epidemic.

The above plan of giving ipecacuanha has been successful, but mainly in proportion to its early employment. If not early administered, or if unsuccessful, the following may be *apropos*: give castor oil to clear out the intestines, and let it be followed by mild opiates, preferably a Lead and Opium Tabloid, or two Tabloids of Dover's Powder (5 gr. each) every

hour or two to secure rest for the emptied bowel and relieve pain.

Should eight or ten hours pass without a movement, such a dose may be repeated only in four or six hours, and be omitted entirely when a day has elapsed without trouble. But if the stools continue frequent, exhibiting a preponderance of mucus over feculent matter, much relief can be obtained from warm water enemata containing each, one Morphine Tabloid ( $1/8$ gr.) previously dissolved in a little water.

**Opiate Enemata.**—These may be gently injected into the rectum from the “enema syringe” after a movement, once in three or four hours, according to the frequency and pain of the passages; an effort should be made to retain them as long as possible. The retention of the enema will be greatly facilitated by the nurse’s approximating the buttocks by gentle compression with the palm of the hands, the patient meanwhile lying “upon the stomach.” If efficient, the interval between the doses must be increased, and the opiates, as before enjoined, entirely omitted when a day has elapsed without pain or passage.

The relief afforded by enemata, and their importance, are very great. The patient may be almost narcotized with opium, and yet, if the enemata are withheld, suffer with the pain in the anus and the desire to be on the vessel. About four table-spoonfuls of fresh warm starch water with the requisite amount of opium or morphine, will generally relieve the tenesmus for two or three hours.

**Mercurials.**—If there be a tendency to recurrence of the mucous stools, it will be advisable to administer a mercurial to revive the activity of the liver and other abdominal glands. One of the Calomel and Ipecac. Tabloids may be given every night till feculent (biliary) matters appear in the passages, when the remedy should be omitted.

**Favourable Signs—Irritable Rectum.**—The change to a natural appearance in the stools is evidence of at least temporary relief to the inflamed parts, and the continuance of this appearance, other things being equal, is the best proof of convalescence. Irritability of the rectum often succeeds Dysentery, the organ having lost some of its retentive power. This must not be taken as a return of the disease, an habitual inspection of the excreta sufficing

to determine the absence of morbid products. It is best to treat this irritability with enemata of thin starch water (boiled), or of warm water, holding in solution one-half of a Morphine Tabloid,  $\frac{1}{8}$  gr., administered morning and evening, and retained as long as possible. Hazeline may be taken internally in doses of a teaspoonful three times a day.

### CHRONIC DYSENTERY.

In spite of all efforts, Dysentery, under unfavourable and predisposing circumstances, may become chronic.

Unless complicated, the fever of the acute form will have disappeared, pain will be less, and continued recumbency no longer so necessary, although prolonged exercise will usually aggravate the symptoms. Some of the passages will appear almost normal, others will be covered with a pellicle of mucus, while others still may be small and consist only of dysenteric products.

A change of residence becomes usually necessary in chronic dysentery, though much may be done by remedies which stimulate the mucous membranes, and are of a balsamic nature. Five to ten drops of Turpentine taken upon dry sugar thrice daily, simultaneously with one or two Tabloids of "Dovers," 5 grs., will sometimes greatly mitigate the symptoms. Occasionally the turpentine will produce in males uneasiness at the neck of the bladder, when the dose must be lessened or temporarily omitted.

In the latter case, Bismuth in doses of from two to four Tabloids (5 grains each), with a Tabloid of Dover's powder, may properly take the place of the Turpentine.

As the efficiency of the Bismuth depends upon its local action, the dose should be quite large. Bismuth often causes "inky" stools, the colour being due to the action of gas (sulphuretted hydrogen) on this metal.

Injections into the rectum of diluted Hazeline, two tablespoonfuls to eight of warm water, will under the same circumstances prove useful.\* This must be retained. Hazeline may also be taken in drachm doses by the mouth three or four times a day.

**Relapse.**—If general abdominal tenderness reappear, with renewed coating of tongue, loss of appetite, giddiness

\* Care must be taken that the syringe be thoroughly disinfected before anyone else is allowed to use it. The stools should always be disinfected.

and headache, and especially if biliary (feculent) stools appear but rarely, or are altogether absent, a mild mercurial should again be taken, preferably a "Livingstone's Rouser," every 3 or 4 hours, to be discontinued as soon as normal biliary stools appear.

The usefulness of Quinine in Dysentery is limited to those cases in which the disease has arisen in connection with malarial fevers, and is dependent apparently upon the same cause as these. The drug may then be given as directed on page 25 in full doses once a day, or thrice daily in smaller quantities (one Tabloid, 3 grs.), as an appropriate tonic in the chronic form. when convalescence is tardy.

## CHOLERA.

Two varieties of cholera are recognised, viz., *Choleraic Diarrhœa*, and *Asiatic Cholera*.

Choleraic diarrhœa is usually a mild disorder arising from the presence of undigested food within the bowels, coincident with the depressing influences of undue exposure to the rays of the sun, or of a chill after exhaustive fatigue. This disease is rarely epidemic, and a fatal result is uncommon.

Asiatic Cholera has been alleged to arise from contaminated drinking water (containing the bacilli of Koch), under like depressing circumstances. The disease is distinguished by a tendency to early collapse of all the vital powers, usually ending in death; or, if the patient revive, it may be only to pass into a febrile state of the typhoid type, where he sometimes lingers between life and death for days before hopeful symptoms appear. The disease is commonly epidemic.

**Symptoms—Diarrhœa—Choleraic Stools—Nausea—Cramp.**—In the early stages the two forms of cholera are similar. Diarrhœa generally precedes the characteristic developments, which are (1) profuse, watery, usually frequent and painless stools, devoid of the colour or odour of normal ("biliary") passages, resembling thin pea-soup, or dirty rice water. (2) Nausea speedily follows, and the matters vomited resemble those passed from the bowel. (3) Cramps in the calves of the legs, thighs, feet and hands, and sometimes of the trunk, occur simultaneously with the evacuations, and torment the patient. Here the forms diverge, "Asiatic cholera" tending to speedy collapse, despite remedies, "choleraic diarrhœa" rarely going so far,



but yielding quickly to proper medication and good nursing, and convalescence being almost immediately established and rapidly progressive.

**Collapse.**—The collapse of Asiatic (or “true”) cholera is ushered in by a sense of physical and mental exhaustion and indifference, with deathly pallor of the face and hollowness of eye, a sepulchral voice (or its entire loss), a shrunk and withered condition of skin, with extreme coldness of the extremities and even of the tongue and breath itself, while the victim complains of heat. The pulse becomes very rapid and feeble, till altogether lost. Simultaneously, the body temperature falls below the “norme,” and has been found before death as low as 92°F. The bladder is empty, but there are intense and frequent calls to micturate. Passages occur unconsciously, or cease to find vent, while the abdomen becomes greatly distended by the accumulation of fluid within, and unless reaction take place, death speedily ends the scene. In tropical countries the patient often “falls down and dies within one or two hours, without vomiting or diarrhœa.”

All the symptoms above enumerated point to severe shock of the nervous centres (brain and spinal cord) with a consequent more or less complete extinction of vital processes so far as the alimentary canal is concerned.

**Treatment.**—The object must be, first, to check the diarrhœa; and second, to revive and restore the glandular system of the bowels to normal activity. If successful, a fearful waste of fluids will be averted, the stomach will resume its functions, and recovery ensue.

**Preventive.**—When an epidemic of Cholera is present, all one’s hygienic surroundings and sanitary arrangements should be carefully scrutinized.

The clothing during both day and night must be woollen, and a flannel belt by no means omitted. The water-supply must be of the best, and all water that is to be drunk must be boiled and cooled in a safe place.

In view of recent researches, some of the mineral acids may be taken with the water, preferably 10 to 20 drops of the Aromatic Sulphuric Acid to a glass of water (since it is astringent, and an excellent antiseptic), three or four times a day. The acid may be continued during the precedent diarrhœa, but given up when choleraic passages appear, and the necessity for other and more powerful remedies arises.

During diarrhœa proper, the injunctions given upon page 11 should be followed, and the acid mentioned given between other remedies there indicated.

**Special Measures.**—On the first appearance of true choleraic symptoms envelop the patient, undressed, in woollen blankets, and apply bottles of hot water (in woollen stockings) next the thighs, calves and feet. Mustard leaves or poultices must be again and again applied to the spine throughout its entire length, and over the entire chest and abdomen; if smeared with the white of an egg they will not blister.

When decided redness is present, they may be temporarily removed, but are not to be dispensed with till the general colour and warmth of the body have become normal. The *burns* of a mustard poultice are difficult to heal, and it should be used with some caution, especially in children.

The patient must on no account rise for passages, and a vessel of some convenient shape should be always at hand to be placed under him when required. Immediately remove the discharges from the room; a powerful disinfectant should be thoroughly mixed with them (e.g., a tablespoonful of the "Liquor of Chloride of Zinc," B.P., or a teaspoonful of the Saturated Solution of Carbolic Acid to each stool), before they are thrown out; and the receptacle should be afterwards washed and disinfected (with a weaker solution) before being used again.

It is well to keep a dry and clean cloth under the patient's hips, which must be removed and at once burned when it becomes wet.

**Hot Foods and Drinks.**—On the well-founded hypothesis that the death-like loss of body heat is to be combated in every way, all drinks and foods should be given as hot as they can be swallowed, in small quantities and often, quite irrespective of vomiting. The powers of the stomach being in abeyance, all fluids must be nutritious, but very dilute, and predigestion with Fairchild's Zymine is of the greatest importance.

**Predigestion of Foods.**—Peptonized milk (see p. 7), hot, in teaspoonful quantities, or more if tolerated, every five minutes, and beef-tea (not essence) prepared by adding as much Zymine (Fairchild), as will lie on a one shilling piece, to a coffee-cupful of beef-tea may be given alternately with the milk, or as a change from it.

**Alcoholic Stimulants.**—Alcohols are not permissible by the stomach, but whiskey and water, equal parts, may be used hypodermically (*see* Introductory Chapter), a syringe-ful being administered every 20 or 30 minutes till reaction is established (Jones).

**Drinks.**—Black Coffee, by the teaspoonful only, may be useful occasionally, and hot toast water may much diminish thirst. Rice, browned over the fire and steeped, makes a drink which is acceptable to many.

**Medicines.**—First give a hypodermic injection of a Tabloid containing Morphine  $\frac{1}{8}$  gr. and Atropin  $\frac{1}{100}$  gr., dissolved in a syringe-ful of boiled water. Rain water, if pure, will answer. If surface warmth and colour do not return within an hour, this may be repeated, but not a third time. After the first injection give a Calomel and Piperine Tabloid (with a little milk or beef-tea), and repeat every 20 or 30 minutes, if the passages occur as often as that. When they appear at greater intervals, give the Tabloids from every 40 minutes to one hour apart.

Let the stools be carefully inspected, and when biliary (normal) matters appear like "floating islands" upon their surface, discontinue the remedy. There is no more reliable evidence that reaction has begun than this appearance. It is commonly preceded by marked relief of nausea, and a distinctly lengthened interval between the passages.

**Nausea.**—Meantime, if nausea be extreme, one drop of the Saturated Solution (90 per cent.) of Carbolic Acid may be given midway between the doses of Calomel and Piperine in a tablespoonful of boiled or rain water.

After the fifth dose, it had best be given only once in two hours, or discontinued if unavailing.

**Cramps.**—If cramps be severe, one hour after the second and last hypodermic injection has been administered, 10 grains of Chloral, dissolved in four syringe-fuls of water,\* may all be injected in like manner, and repeated every two hours if necessary.

If the third dose prove useless, give up the remedy.

Should the passages cease altogether without a corresponding amelioration of other symptoms, examine the abdomen; if this be greatly distended, give a copious enema of warm

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\* The Chloral should be thus well diluted, as it is apt to cause abscesses.



water, salted moderately, to produce an evacuation of the retained fluids.

Gentle movements of the hands over the bowels contribute to this end, as do flannels wrung out of hot water, and sprinkled with turpentine.

In case of imminent danger, to be recognised by the failure of all these means to effect reaction, the hypodermic injection of whiskey (*see* pp. 2, 3 & 20) may be resorted to every five or ten minutes until some revival is apparent or death occurs. The occasional survival of one who has apparently breathed his last is warrant for the constant and unremitting attention of the friends to every detail until hope is no longer possible.

**Abuse of Opium.**—Finally, it is necessary to observe that the common and abundant abuse of opiates in the treatment of cholera, particularly in the absence of skilled advice, leads to the worst of results; it is very apt to lull both patient and friends into fancied security by its superadded stupefaction of the vital powers, contributing to the retention of noxious products within the intestines, retarding convalescence and adding to the “typhoid” and feverish depression which is apt to constitute the after-stage of this disease. (For treatment, *see* pp. 34 & 35). The doses of opium recommended for preliminary diarrhœa and the first hours of choleraic symptoms, are all that ordinarily should be trusted to non-professional judgment.

**Consequences.**—The greatest prudence and care must be exercised during convalescence, lest chronic diarrhœa or dysentery supervene (*see* Chapter II., Food and Dress).

Every article of clothing or of bedding that has been soiled by choleraic discharges must be burned.

## CHOLERAIC DIARRHŒA.

**Simple Cholera or Choleraic Diarrhœa.**—In simple cholera, when no epidemic is recognised, any apparent tendency to collapse may be met as indicated in these pages on the graver disease, the same remedies (given with less frequency in choleraic diarrhœa) being appropriate to both.

## CHAPTER IV.

## FEVERS.

**Origin.**—The fevers far most commonly met with in the tropics are malarial and miasmatic in origin.

**Characteristics.**—Intermission and periodicity of return are the prominent characteristics of all malarial fevers. As these features are lost we approach another class representing morbid and organic changes in special organs, of which typhoid fever is the type.

Intermediate between these extremes lie the remittent and “pernicious” fevers which present so continued a saturation of the body with malarial poison, that the nerve centres are overwhelmed, their control over the nutrition and functions of important organs being lost, and a state bordering upon organic change brought about.

## INTERMITTENT FEVER OR AGUE.

This is so called because of the intermissions between the attacks, which recur regularly and with similarity.

It is due to a malarial poison, to the production of which three conditions are requisite : porous soil, moisture, and a certain degree of warmth. Decaying vegetable matter is an adjunct to its production. It is most common about marshy districts, and appears often when the turf is turned, or when a street is opened. It is most active during the night, and near the ground ; soldiers sleeping on the ground are apt to have it. On this account the upper rooms in many places are the best. The poison may be conducted by the wind ; hills and trees intercept it, and the surfaces of lakes absorb it as it is blown over.

A person who has had intermittent fever is more apt than ever to have it again. It is not contagious, and is most common in autumn.

The conditions that favour its absorption and morbid effects within the system, are those which lower the vitality,

of which mental anxiety, great and exhaustive fatigue, long exposures to the sun's rays, or to cold and wet, and "chill after excessive perspiration" are examples.

**Premonitions.**—The premonitory symptoms are languor, drowsiness, lost of appetite, headache, feverishness, coated tongue, often constipation due to inactive liver, backache, wandering pains in the limbs, and sweatings in the early morning hours.

**Symptoms.**—An attack of ague usually comes on suddenly, though it may be gradual. The patient may have an attack and be over it in a few hours, to be attacked again the next day, or the second day, or the third day, and so on in cycles.

The attack consists of three stages, cold, hot, and sweating respectively.

The *cold stage* begins with shivering, and the victim may shake like an aspen leaf. The teeth chatter; the skin is pale and dry; the breathing and pulse are quick; and there are backache, pains in the limbs, and headache. The temperature gradually rises, and in from half an hour to two hours the hot stage appears.

The *hot stage* appears at first as a comfortable warmth, but soon this becomes excessive. The face is congested and red, and there are headache and occasionally delirium. This stage lasts from one to four hours, and sometimes longer.

The *sweating stage* follows the last, and in it the skin becomes bathed with perspiration, and all the foregoing symptoms abate. The patient may now fall asleep and awake all right.

**Varieties.**—Each attack with its three stages is repeated, commencing every day at the same hour, when the fever is called a "quotidian," or every other day ("tertian"), or every fourth day ("quartan").

There are variations of these several forms. A second paroxysm may occur within the first day of 24 hours, and a single one upon the third day ("double tertian"), or there may be a severe attack on the first, a milder one on the second, and none at all on the third, with a return of severe character on the fourth ("double quartan"), but all forms will be distinguished by a definite period of freedom from fever and tolerable comfort.

**Temperature in Cold Stage.**—Though the patient be “chilled,” the thermometer will demonstrate an actual increment of heat during the cold stage, amounting to one or two degrees above the *norme* (see Introductory Chapter). It is reported that this stage, in Africa, is sometimes passed unnoticed by the patient.

**Temperature in Hot Stage.**—In the commencement of a subjective consciousness of fever, the mercury is found rapidly mounting till it attains sometimes  $107^{\circ}$  Fahr., which is slowly receded from, as sweating begins and continues, till the body resumes the normal range of  $98\frac{1}{2}^{\circ}$  and the intermission is established.

The hour for renewal of this series of changes may be anticipated if uninterfered with by treatment, or postponed if treatment be successfully inaugurated. Observation during the hour or two immediately preceding a paroxysm will often shew a temperature reduced below *norme*.

**Preventive Means.**—When in malarious districts, many travellers are alleged to have succeeded in preserving themselves from any malarial outbreak by taking four or five grains of Quinine (or one Tabloid, 5 grs.), on retiring, or at early dawn every day. Black coffee and lemon juice have each their advocates to the same end, when taken with or without the quinine.

**Pilocarpine.**—When paroxysms have occurred and their hour of advent can be confidently predicted, a hypodermic injection of Pilocarpine,  $\frac{1}{10}$  gr. (one Tabloid), half an hour antecedent to chill, will, by reason of the profuse sweating following it, break up the expected attack or very much mitigate its severity.

Two of the  $\frac{1}{10}$  gr. Tabloids taken by the mouth an hour before chill, will accomplish the same purpose.

**Palliatives.**—When anticipating, or upon the accession of, the cold stage, the patient should betake himself to bed under warm coverings, taking warm or hot drinks (not alcoholic) to promote the skin's action. When fever is apparent, the coverings should be gradually laid aside until preferably a single blanket remains; the drinks should be cooling, and spongings of the wrists, hands, and feet once each half hour with cool water may be resorted to with good effect until sweating begins.

Frequently wiping the body, still under cover, with dry cloths or flannels, upon which Essence of Camphor or

vinegar has been sprinkled, will much mitigate the patient's discomfort.

**Remedies—Emetics.**—If the stomach be full of undigested food when the *chill* begins, an emetic will shorten this stage (*see* p. 9).

**Laxatives.**—The first indication is to get a *free* action of the bowels; give two “Livingstone's Rousers” at once.

**Febrifuges.**—During the hot stage a sudorific-and-febrifuge is useful. Give, at its commencement, three or four Tabloids of Antipyrin, 5 grs. each. This dose does not often require repetition, but if the temperature rise at the rate of more than one-half a degree every hour, two Tabloids more may be given two hours after the first dose.

**Curative means.**—Quinine is considered a specific for this fever. It may be given in one dose of four Tabloids, 5 grs. each, an hour or more before the time for chill, or it may be administered in ten grain doses (two Tabloids) every four hours, commencing with the appearance of the sweating stage, and continuing till the next chill has commenced or failed to appear, if a “quotidian;” or for twenty-four hours, and then once in eight hours on the second day, if a “tertian.”

When an anticipated paroxysm does not occur, two tabloids (5 gr. each) may be taken morning and evening till another attack is also aborted, when a single dose at night for a week, will probably effect a cure.

The thermometer will prove the best guide afterward in determining the necessity for a return to Quinine.

If, while the patient feels even tolerably well, the temperature ranges from  $97\frac{1}{2}^{\circ}$  or  $98^{\circ}$  at dawn, to  $100^{\circ}$  at noon of any day, there is abundant evidence of a necessity for its continuance. (For table of temperature common in Intermittent Fevers, *see* Appendix).

The paroxysms shew a decided inclination to recur at periods of seven days.

Previous attacks not only render a European more susceptible to malarial poison, but often produce Sequelæ of a serious nature. (*See* Sequelæ of Malarial Fevers, p. 28).

## REMITTENT FEVER.

This is also a malarial or marsh fever, principally occurring in tropical climates. It resembles intermittent fever, but in the intervals between the attacks the fever only remits



or partially gives way. The thermometer will shew certain variations of temperature occurring regularly, and evidencing that quality of periodicity which always declares a malarial origin. (See Appendix for Table of Temperatures common to remittent fevers).

Remittent fever is the form most commonly attacking new comers in unhealthy and malarial countries; it is usually then very severe, but not so likely to recur, survivors, if affected at all, being more subject to attacks of intermittent fevers when remaining in the same localities.

**Symptoms.**—There is a slight cold stage, which quickly passes into the hot stage, in which the temperature mounts as high as in the hot stage of intermittent; the duration of the hot stage is from six to twelve hours. There is severe vomiting, often of blood. The tongue is parched, and there are intense nervous symptoms; headache is apt to be most severe and constant, and sometimes there are delirium and coma. A brief sweating stage follows the hot stage, with partial defervescence of all symptoms.

The attacks occur each mid-day for from five to fourteen days, the remission appearing in the mornings.

So called “bilious” symptoms are predominant in this fever, the skin and eyeballs becoming jaundiced, the tongue being covered with a yellowish pasty and tenacious coating, the breath offensive, with bleeding from the nose, herpetic eruptions upon the lips, a scanty excretion of yellowish brown urine, and constipation of the bowels.

**Favourable Signs.** — The favourable signs are the occurrence of a more marked and longer remission, with lower temperature throughout the day, and general amelioration of the above-mentioned symptoms. When the reverse happens the case is very grave.

Under the latter circumstances its similarity to yellow fever is so great, that there is very little to distinguish the two, unless it be that quinine relieves remittent but does not even palliate yellow fever.

**Treatment.**—The treatment appropriate to Remittent Fever is similar to that already suggested for Intermittent Fever, but prominence must be given those remedies which stimulate biliary and glandular secretions.

**Mercurials**—(“Livingstone’s Rousers.”)—Calomel is chief among these, and must be given, either in form of

“Livingstone’s Rousers” (six grains each of Jalap and Rhubarb, with four grains of Calomel, and the same quantity of Quinine), or two of the Comp. Cathartic Tabloids, with one Tabloid (five grains) of Quinine as a substitute “when lethargic and other premonitions appear.” If copious brownish stools do not appear within five hours, a full enema (of three or four syringefuls) of warm water, containing two teaspoonfuls of Epsom Salts, may be thrown into the rectum, and retained as long as possible to assist the cathartic.

**Palliatives.**—Palliatives as described for intermittent fever (p. 24) should be used.

**Cooling Bath.**—Should the Antipyrin be inadequate to reduce the temperature of the hot stage, and the fever attain  $105^{\circ}$  or  $106^{\circ}$ , the patient, if possible, and if a vigorous person, should be placed in a bath at  $90^{\circ}$  Fahr.,\* which should be gradually cooled down to 15 degrees below the body’s normal temperature ( $83^{\circ}$ ), and he should be kept in it for twenty minutes, or until the fever lowers to  $101^{\circ}$ . On the other hand, if he be very weak, or much reduced, the cool spongings already mentioned should be practised.

When the breathing is laboured, and the patient insensible, apply mustard leaves over the entire chest, and along the spine from the head downward, until the skin is highly reddened.

**Remedies—Quinine.**—The purge having acted, and the febrile temperature being lowered, the nausea and vomiting are usually mitigated, and four Quinine Tabloids (5 grs. each) may be given in black coffee, or with lemon-juice. If vomited, three of the Quinine Hypodermic Tabloids should be given.

A full dose of quinine by mouth, or half the dose by the skin may be repeated in grave cases. the former twice in six hours, the latter four times, without reference to remissions. It is well to remark here that “buzzing in the ears,” or ‘fulness of the head,’ is no criterion of the effect of this all-important remedy. These effects must be absolutely disregarded, and the medicine continued till the fever is overcome, and its recurrences brought to an end.

**Warburg’s Tincture.**—It has been found by some that “Warburg’s Tincture” (a solution of quinine with aromatics) is very efficient in breaking up remittent fever.

\* Use an ordinary, not the “Clinical Thermometer” for such tests!

It is given in a table-spoonful dose after a purge, and during the remission, and repeated in three hours, with the same precautions as to exposure and chill after sweating occurs, as in the case of quinine. It must never be forgotten that ample support by proper and well-prepared food must attend upon all the measures previously described.

**Sequelæ.**—The patient, after repeated attacks of intermittent fever, or a prolonged remittent, especially if he be continuously subjected to the same environment, will often experience “sequelæ,” or complications that demand attention.

These are accompanied by an impoverishment of the blood, shewn by pallor and a peculiar sallowness, loss of appetite and flesh, weakness of all the functional processes, and great prostration of strength.

Neuralgias of the head and face, or back and thighs, are common, and enlargements of the liver and spleen are not unfrequent.

**Treatment.**—The most useful tonic under these circumstances is a combination of Quinine, Arsenic and Strychnine, one tabloid being taken, after food, three times a day for two or three weeks.

**Caffein.**—When the neuralgias are periodic, much relief may be obtained from the use of from two to four Tabloids of Caffein taken every two hours till the pain ceases. The remedy is more effectual if taken into the arm, hypodermically, in doses of two tabloids, dissolved as described (*See* Introductory chapter).

**Morphine and Atropin.**—Failing with caffein, a hypodermic injection of one Tabloid of Morphine  $\frac{1}{8}$  gr., and Atropin  $\frac{1}{100}$  gr., will probably be successful. In sciatica (neuralgia of the outside of thigh) the needle may be inserted deeply over the nerve, with usual precautions. (*See* introductory chapter.)

This latter injection should not be repeated, without skilled advice, oftener than once in two or three hours, and never unless for severe pain. After the injection the patient must keep perfectly quiet, or untoward symptoms may appear.

During the whole course of such neuralgias, the tonics just mentioned are most desirable, since they promote the



nutritive processes, but their usefulness is largely dependent upon the amount of good food received into the system.

"Pain is the prayer of a nerve for healthy blood," said Romberg; or, as Anstie has it, "It is the cry of hungry nerves."

If after a course of tonics combined with arsenic, the eyelids become swollen and puffy, the eyes bloodshot, and the tongue covered with a milky white deposit, the arsenic should be omitted. It may be renewed after an interval of ten days.

### **Dropsy—Signs of Insufficient Action of Kidneys.**

—When the kidneys have been much deranged during remittent fever, shown by scant excretion or suppression of urine, or an appearance of blood with it, disease of these organs may continue, and prove a serious obstacle to recovery. In this case the region of the kidneys will probably be tender upon pressure, and the face unnaturally swollen in the morning, while the feet will be most so at night, when the force of gravity has during the day operated to favour the descent of fluids effused within the tissues.

Here an exclusive peptonised milk diet is essential; woollen garments next the skin must be rigidly adhered to, and every precaution taken against chill.

**Caffein as a Diuretic.**—A Tabloid of Caffein  $\frac{1}{2}$  gr. once in four hours will increase the quantity of urine passed.

**Lemonade.**—Lemonade holding in suspension a teaspoonful of pure powdered cream of tartar to the tumbler of water is of service in the same direction. It may be taken three or four times a day, unless it relax the bowels too much, when the dose should be lessened.

**Chronicity.**—Weeks and months may elapse before the impaired condition of the kidneys is overcome, and only the most prudent can hope to regain perfect health.

**Hepatic and Splenic Enlargement.**—When enlargement of the liver or spleen has arisen, the tonics (Quinine, Arsenic and Strychnine Tabloids, or Quinine Tabloids) should be taken, and application made of the Red Iodide of Mercury, 13 grains to the ounce of lard or Lanoline, with thorough friction over the enlargement, either before a good fire, or taking care that the parts be afterwards exposed to the sun's rays. A portion as large as a walnut may be rubbed in twice in one day, and repeated after a fortnight's interval, with the best effects (Maclean).

These cachectic states are all indicative of the propriety or even necessity for a return to healthier climates in order to effect a restoration of health.

### TYPHOID FEVER.

This is supposed to be due to a germ, conveyed through water from closets, cesspools, or drains. It is not contagious, and is not usual in infants or the aged. It inflames the glands in the intestinal wall, and these ulcerate. The ulceration may extend till the bowel is perforated. The spleen is increased in size, and the mesenteric glands enlarged. This fever generally lasts from three to four weeks, and, in bad cases, even longer. Incubation—ten to twenty days.

In tropical climates, typhoid fever rarely occurs except in populous districts.

*Symptoms.*—It is insidious, and the first symptoms are dyspepsia, sleeplessness, languor, *dull pain of the head*, often succeeded by slight delirium at nights, loss of appetite, thirst, nose-bleeding and diarrhoea. At first (for three or four days) the patient often does not feel sufficiently ill to take to his bed. Great feebleness comes on; the mind is dull and the face pale, but the cheeks have a bright, circumscribed flush. The tongue is at first coated with a thin fur of whitish color that does not extend to the tip or edges, which are red. It is small, pointed, *moist*, and tremulous. There is commonly diarrhoea, with pale ochre or drab - coloured evacuations of offensive odour and alkaline reaction. The abdomen is slightly swollen, with tenderness and gurgling on pressure above the right groin. A rash appears about the seventh day on the chest and abdomen. There may be as few as four or five spots; these are rose-coloured and lenticular, last three days, and are followed by others; they disappear for a moment after gentle pressure with the finger.

In the *second week* the face is flushed, the tongue becomes dry, cracked, and brown, and trembles when protruded. It may peel in the centre, leaving a shiny red streak which resembles raw beef steak. The pulse varies with the febrile heat between 100 and 120 in ordinary cases. The temperature is probably above 103° Fahr. There are some cough and expectoration, and the patient lies mostly on the back. Some delirium may also appear.

The dangers which are to be most apprehended lie in the direction of nervous exhaustion from long continued high body temperature and its consequences, and upon ulceration of the inflamed patches, perforation of the bowel and hæmorrhages therefrom.

The *third* is the bad week, and the time of most danger. The patient lies exhausted upon his back. The tongue is hard and dry, and often covered with a brownish, dark, thick coating which may extend over the teeth like a skin and on to the lips. Delirium and stupor may supervene, the bowels and bladder acting involuntarily. Sometimes the urine must be drawn with a catheter. It is a bad omen to see the patient sink down toward the lower part of the bed.

The skin is for the most part dry, even at night when the temperature is descending, until the third or fourth week.

About the commencement of the *fourth week* in favourable cases sweating begins, the range of the mercury subsides day by day, the pulse falls in due proportion, the tongue becomes less glazed or more moist, and the mental powers recover their equilibrium.

The *fifth week* sees convalescence established, but relapses are frequent, and not uncommonly fatal.

Many variations from this typical order of symptoms occur, dependent upon the constitutional vigour of the patient, the condition of the inflamed intestinal tissues, and the degree of care exercised in diet and general nursing.

**Range of Heat.**—The temperature affords the most conclusive early evidence of the presence of disease. The successive morning temperatures show a gradual daily increase of a fraction of a degree, but the afternoon temperature of each day is over a degree higher than that of the morning. “The opportunity of watching this gradual rise is often wanting; but if, on the third or fourth day of an illness, without obvious local cause we find a temperature of  $103^{\circ}$  or  $104^{\circ}$  Fah., and especially if the evening rise and morning fall are marked, the probabilities are that the case is one of typhoid fever. At the end of the first week the temperature will have reached the level, which in that particular case will be maintained in the absence of complications throughout the dominant stage of the disease— $103^{\circ}$ ,  $104^{\circ}$  or  $105^{\circ}$  Fah. in

the evening,  $1^{\circ}$  or  $1\frac{1}{2}^{\circ}$  Fah. lower in the morning. In mild cases it may not be more than  $102^{\circ}$  when highest." (*Quain's Dict.*) See Appendix for chart of temperatures in typhoid fever.

**The Typhoid State.**—There is what is known in medicine as the "typhoid state," a condition of the most extreme depression of mind and body, with irritable bowels, in which the patient sinks down toward the lower part of the bed, passes the *faeces* involuntarily, etc. The "typhoid state" is not typhoid fever, but may occur in it, or be produced by long continued and unmanageable malarial fever, pneumonia, etc. The thermometer is the best guide for differentiating the "typhoid state" from typhoid fever. Those in the typhoid state are seldom known to recover.

**Dangers.**—Ulceration of the intestines is very insidious, and perforation at, or hæmorrhage from, a single point, when the general surface is doing well, may speedily end the scene.

**Treatment**—CAUTION.—The principal differences to be observed between the treatment of this and of the fevers that have already been described, are—first, that purgatives here are seldom admissible for evident reasons; and, second, that quinine is not a specific, since the fever cannot be "broken up," being independent of malarial causes. The patient must go to bed at once, and be kept absolutely quiet.

A careful study of the thermometer's range (*See Appendix for chart*), will generally shew an absence of cold, hot, and sweating stages which at the onset always indicate malarial fevers. The rapidity of succession will be absent, even if the order of symptoms be apparently present, for there are rare instances where an immediate diagnosis is difficult.

**Laxative.**—When doubt exists the question of purgation must not be hurriedly decided. But if constipation has been a precedent state, a small dose of castor oil, or a single "Laxative" may be taken to unload the bowel of matters that might prove irritating; after this—which may be assisted, if necessary, by warm and slightly salted enemata—it is best to confine one's self to the use of the latter, if the bowels do not spontaneously move every 48 hours.

**Febrifuges.**—During the first three weeks, should the afternoon temperature exceed  $103^{\circ}$ , Antipyrin, three or

four Tabloids (5 grs. each), may be given about 10 or 11 o'clock every morning, and a second dose of half the quantity administered two hours afterwards, if the first have had no effect.

If the temperature fall rapidly after the larger dose to near the norme ( $98\frac{1}{2}^{\circ}$ ), and nausea or vomiting occur, two or three Tabloids only should be administered on subsequent occasions. Sometimes one dose lowers the temperature for a couple of days.

**Caution.**—The lowering of vitality is usually so great by the end of the third week, that a continuance of “febrifuges” may become a doubtful procedure, and it is well to substitute frequent spongings of the surface under a blanket, with cool water, once every hour during the height of fever.

**Restlessness—Delirium.**—If there be great restlessness, complaint of headache and pain, with or without delirium at times, one or two Tabloids of Chloral (5 grs. each) may be given. While a second dose is allowable, it is *not advisable* unless the symptoms are urgent.

This remedy often conduces to a quiet night.

**Diarrhœa.**—Upon the first appearances of diarrhœa, with or without abdominal distension and tenderness, “rectified” turpentine, in 5 or 10 drop doses, on dry or moist sugar, or mixed with a teaspoonful of glycerine, should be given three or four times in 24 hours.

If a good result do not immediately follow, simultaneous doses of one or two “Dover’s” Tabloids (5 grs.), may be given, according to their effect upon the action of the bowels. With this addition, turpentine does not often occasion irritation at the neck of the bladder, but if this occur, the dose must be lessened or omitted altogether for a day. Flannel cloths wrung out of warm water and placed over the bladder are here needed. If the bowels move more than four times a day, the “Dover’s” Tabloids, or Lead and Opium Tabloids, will be *specially indicated* in occasional doses.

**Paralysis of Bladder—Catheterization.**—There is sometimes paralysis of the bladder during the height of Typhoid Fever, and whether retention of urine thus result, or happen as the effect of Turpentine, it will be necessary to relieve the organ by passing a flexible catheter \* at least

\* This should be warmed in hot water, then well oiled, and passed gently and slowly into the bladder, its entrance being known by the flow of urine.



twice a day. Turpentine should not be finally omitted until convalescence is well established, and a single dose, once a day, for two weeks thereafter, will be a prudent measure.

**Hæmorrhage—Tannin.**—If hæmorrhage should occur (and the least solid food, or over-exertion of the patient, is apt to induce it, in spite of preventive measures), flannels wrung out in cold water (iced, if possible,) must be kept constantly applied to the abdominal surface, and two Tabloids of Tannin (5 grs. each) administered every hour or two till it ceases. Hazeline should be given in teaspoonful doses internally; ice in flannel placed over the right groin, and small pieces plunged in tepid water and then crowded into the rectum, are efficient measures. The Lead and Opium Tabloids are valuable.

**Quinine.**—Quinine is of little value, though sometimes given as a tonic in doses of two grains, every four or six hours, when great prostration is imminent. When the fever is very high, a dose of six 5 gr. Quinine Tabloids will reduce the temperature for many hours. In the beginning where there is doubt about the fever being typhoid quinine should be given.

**Food.**—In this fever, the management and supply of nourishment are of the utmost importance. Because of the absence of active saliva, of the imperfect secretion of gastric and other digestive juices, of the consequent weak digestion, imperfect assimilation, and the injured intestine, all food must be given in limited quantities and often, in fluid form, and already predigested whenever practicable. The blandest and least irritating articles must be selected, peptonized milk standing *par excellence* first upon the list.

Beef, mutton, chicken or veal broths, strained absolutely free from solid pieces, may be given, each portion with a single Peptonic Tablet dissolved in it, in half tea-cupful quantities (or less if necessary), every two or three hours. Kepler Malt Extract, with peptonised milk, is good food.

**Beverages.**—For drinks, barley or toast-water, or a "coffee" made with roasted grains of rice, and weak ginger tea, will answer best; while boiled water, cooled, may be given in reasonable allowance.

The white of eggs, stirred (not beaten) in water, with a little port wine and sugar, is often palatable and certainly nutritious.



The yolk of eggs, boiled half-an-hour, separated from the white, pulverized, salted slightly, and stirred into peptonized milk, may be acceptable in convalescent stages.

**CAUTIONS.**—All solid food must be scrupulously withheld until convalescence be well established—speaking broadly, till three weeks after all febrile disorder has disappeared, and the passages become perfectly normal. As long as the lenticular rose-rash continues or reappears, there is still ulceration of the bowels, and solid foods must not be allowed. Trivial pimples and watery vesicles must not be mistaken for this, and the patient starved.

Where hæmorrhages have occurred this period must be yet more extended for perfect safety.

No fruits, jams, or coarse grains of any kind are allowable in this disease at any time, but weak lemonade or orange-water strained, may be allowed for the kidneys' sake, if found, by careful trial, to agree.

**Alcohol.**—In the later stages of typhoid fever, or in pulmonary complications, weak milk punch, or thinned "egg-nog" may prove useful in tiding the patient over a critical period (pale ale is a favourite stimulant with many physicians). Stimulants are indicated when the pulse has become thready and weak, ranging from 125 to 130 or more beats per minute, and the amount of alcoholic liquors contained in them may be in a three-quarter ratio, if other signs of sinking be present. If not possible to administer by mouth, the method by hypodermic injection may be adopted, and suspended when the pulse has become fuller and stronger, and less frequent.

In general, no matter how disinclined the patient may be, food must be given with all the regularity and precision appertaining to medicine, or he may lose more than half his chances of recovery.

**Nutrient Enemata.**—When swallowing is no longer possible, warm peptonized milk or the several meat broths made thin and peptonized with Fairchild's Zymine may be given in enemata, and repeated once in 3 hours.

**Temperature of Room.**—The temperature of the apartment should be about 64°F., and if possible a window in an adjoining room should be kept open. Avoid draughts. The excreta should be disinfected.

## CHAPTER V.

### SUNSTROKE.

There are two morbid conditions dependent upon exposure to extreme heat (not necessarily to the direct rays of the sun), which are liable to be confounded, and as they demand treatment of opposite kinds, it is quite necessary to gain a clear knowledge of their distinctive characteristics.

**Heat Exhaustion.**—The most common of these is known as heat exhaustion, and it attends upon fatiguing labour under conditions of extreme heat and a sultry humid atmosphere.

It is essentially dependent upon a lack of blood in the brain (as in a "faint.") The subject of it becomes weak, dizzy, and often nauseated, stumbles, falls, and is at once unconscious, with pale face, moist skin, feeble slow pulse, and slow, sighing, interrupted respiration. The thermometer shows a temperature at or just below normal ( $98\frac{1}{2}^{\circ}$ ).

**Treatment.**—Removal to the shade, a strictly recumbent posture, the administration of whiskey or wine, or black coffee in small quantities by the mouth if the patient can swallow, or diluted two thirds and thrown into the rectum by syringe, will accomplish restoration in a short time. The hypodermic injection of half to one teaspoonful of whiskey and water, equal parts, once in fifteen minutes till the patient is able to swallow, may prove more convenient.

**CAUTION.**—Cold applications to head or spine are here quite inadmissible.

**Heat Fever.**—The second condition commonly and more properly included under the term "Sunstroke," is called Heat Fever. This state depends upon brain congestion and disorganization of the blood.

Headache, dizziness, nausea, and unconsciousness occur here also, and with more or less rapidity of succession. The face is flushed, the eyes are bloodshot, the pulse is quick and bounding, the skin hot and dry, and the temperature from  $105^{\circ}$  to  $110^{\circ}$  Fahr.

**Treatment.**—Our first endeavour must be directed to the reduction of the body heat. The patient should be moved to the coolest accessible place, the head elevated, and when undressed the whole body is to be douched with cool water, or enveloped in a sheet; it may be wetted constantly and free evaporation allowed. If ice be within reach, this may be rubbed upon the spine and head. Cold water is sometimes injected into the rectum, once in ten or fifteen minutes.

**CAUTION.**—Great care must be taken not to reduce the temperature in the armpit below  $100^{\circ}$ , as depression is sometimes sudden and extreme. If the pulse become less hard, and rapidly reduced in frequency below 90, it would then be well to give teaspoonful quantities of whiskey by mouth; or, if impossible, half a teaspoonful of whiskey and water (equal parts) by hypodermic syringe once in ten or fifteen minutes, till depression is warded off, the cold applications having been withdrawn.

**Convulsions.**—Should convulsions occur and be continuous, Morphine should be given hypodermically, two Tabloids,  $\frac{1}{8}$  gr. each, being dissolved in a syringe of water for the first injection (for a robust adult), and the effect carefully watched. If, in twenty minutes, the spasms be relieved, and the skin more moist with reduced temperature, no more need be given, but if no visible effect be noted, an injection of one Tabloid  $\frac{1}{8}$  grain (half the first dose), may be given half-an-hour after the first, when the remedy should be abandoned unless under skilled advice.

“Recovery is frequently complete, but sometimes tedious, and in many cases imperfect, ending in serious impairment of health and intellect” (Fayrer).

A permanent removal to a temperate climate is indispensable.

**Danger to Drinkers.**—Persons addicted to alcoholic drinks are specially liable to Heat Fever, and in such the disease is apt to prove fatal.

It is well to remember that serious errors of judgment may occur when persons are found in an unconscious state, and no knowledge of their antecedents can be had.

Alcoholic insensibility disappears slowly, and the temperature is usually below  $98\frac{1}{2}^{\circ}$ . The diagnosis between drunkenness and the stupor of opium, or the coma of apoplexy, is however sometimes difficult, and not within our present scope.

## CHAPTER VI.

### RESULTS OF EXPOSURE.

It may be possible that exposure to cold and wet, in some individuals susceptible to these, may engender painful conditions of the muscles akin to rheumatism. These, whether accompanied by slight fever ( $100^{\circ}$  to  $101^{\circ}$ ) or not, usually yield readily to Quinine, or the Salicylate of Soda and Quinine separately, in five grain doses (one Tabloid) every three or four hours.

If fever be a prominent symptom, and any of the joints be swollen, it would be best to commence with ten grains of the Salicylate of Soda (two Tabloids of 5 grs. each), taken every three or four hours till fever and swelling have disappeared entirely, when, if pain or stiffness of muscles remain, the Quinine will complete the cure.

Where fever runs high ( $103^{\circ}$  to  $104^{\circ}$ ) and is continuous through day and night, accompanied with muscular pain and joint swelling, Antipyrin in single doses of 15 grains (three Tabloids, 5 grs. each), may make a decided impression, to be followed by the Salicylate of Soda if a lower degree of fever supervene, or the preparation of quinine mentioned, if fever disappear. This remedy (Salicylate of Soda) will need to be continued two or three times daily for several days after subsidence of symptoms, unless the Quinine be substituted for it on account of progressive debility.

Sore throat, with more or less swelling of the tonsils, and consequent difficulty of swallowing, sometimes forms a disagreeable result of exposure.

It is simply and effectively treated by dissolving in the mouth one or two Tabloids of Chlorate of Potash with Borax every hour or two. If there be cough and soreness of the chest, the Potash and Borax may be alternated with Tabloids of Ammonium Chloride, 5 grs. each. A dose of calomel is one of the best means of reducing an inflamed tonsil.

When a continuous fever is conjoined with the latter symptoms, one should seek a perfectly equable temperature

in bed, seeking to induce free action of the skin by artificial warmth if necessary, and by Pilocarpine, one Tabloid 1/10 gr., once in three hours, or two Tabloids of Antipyrin (5 grs. each) once in four to six hours, till the temperature is normal.

Catarrhal symptoms often outlast the febrile, and may be treated by alternate doses of the Tabloids of Ammonium Chloride, and Tabloids Potash Chlorate with Borax, every hour or two.

Neuralgia and sciatica, which may follow exposures, may be treated as when attending on debility after fevers. (Pages 28 & 29).

## CHAPTER VII.

### SNAKE BITES.

**Venomous Snakes — Non-Venomous.**—In general terms the bite of venomous serpents may be known by the marks of two well defined punctures, which attest the insertion of fangs (Fayrer). Innocent snakes have a double row of teeth of nearly equal size, though this rule is subject to a few exceptions.

**Treatment—Ligature.**—The *first* effort should be to prevent the entry of the poison into the circulation by applying two bandages tightly around the bitten limb, one above the seat of puncture and the other below. Cut out the bitten part, or if this cannot be done, freely scarify it with a knife or lancet.

**Hypodermic Injections.**—*Secondly*, the virus may sometimes be neutralized by injecting immediately and deeply into the wounds, or the tissues about them, some disorganising fluid. Press a tabloid of Potash Permanganate into the wound, and inject a strong solution (made by dissolving a tabloid in half-a-teaspoonful of water) in four or five places all round, and about 1-in. from the centre of the bite. Some pain and much irritation must be expected from this. The syringe must be carefully washed and cleansed after such use.

**Stimulants.**—Stimulants should *not* be given except as a last resource. If given at first they simply encourage death by aiding the circulation to disseminate the poison throughout the system.

Nutritive broths, strong tea and coffee, may be given in small but oft-repeated portions.

**Insect bites.**—The poisonous bites of insects may be best treated by a solution of Carbonate of Ammonium, two tabloids, dissolved in a tablespoonful of water, applied with a small pledget of absorbent cotton continuously.

The resultant suppurative surfaces may be dressed with cotton saturated with Eucalyptine until cicatrized.

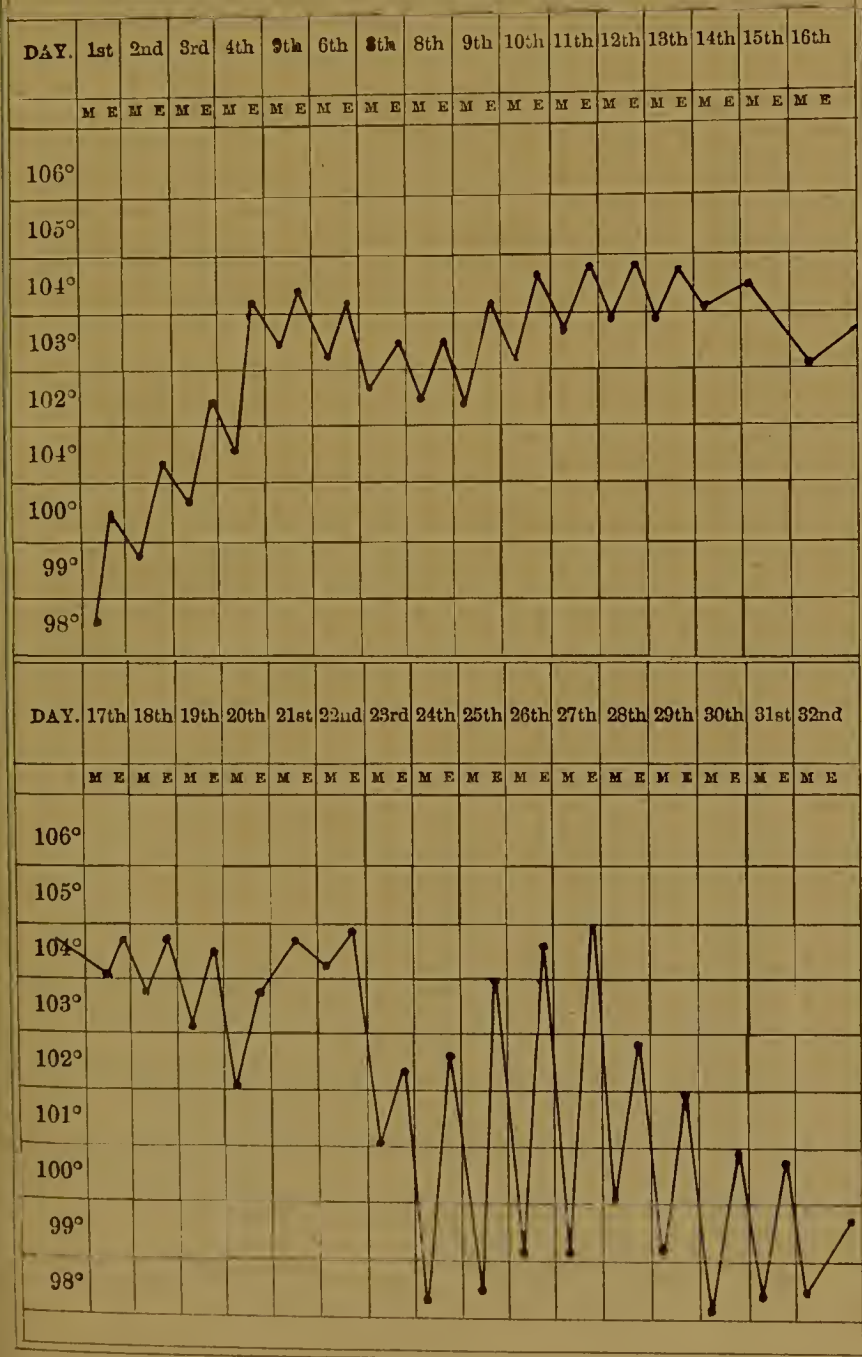
As a preventive of mosquito bites, the combination of oil of pennyroyal (*Ol. Hedeomæ pulegioidis*) and menthol, each one part, pulverised camphor two parts, and Lanoline twelve parts, smeared upon exposed surfaces, will be found effective. This ointment also relieves the itching consequent to being bitten.

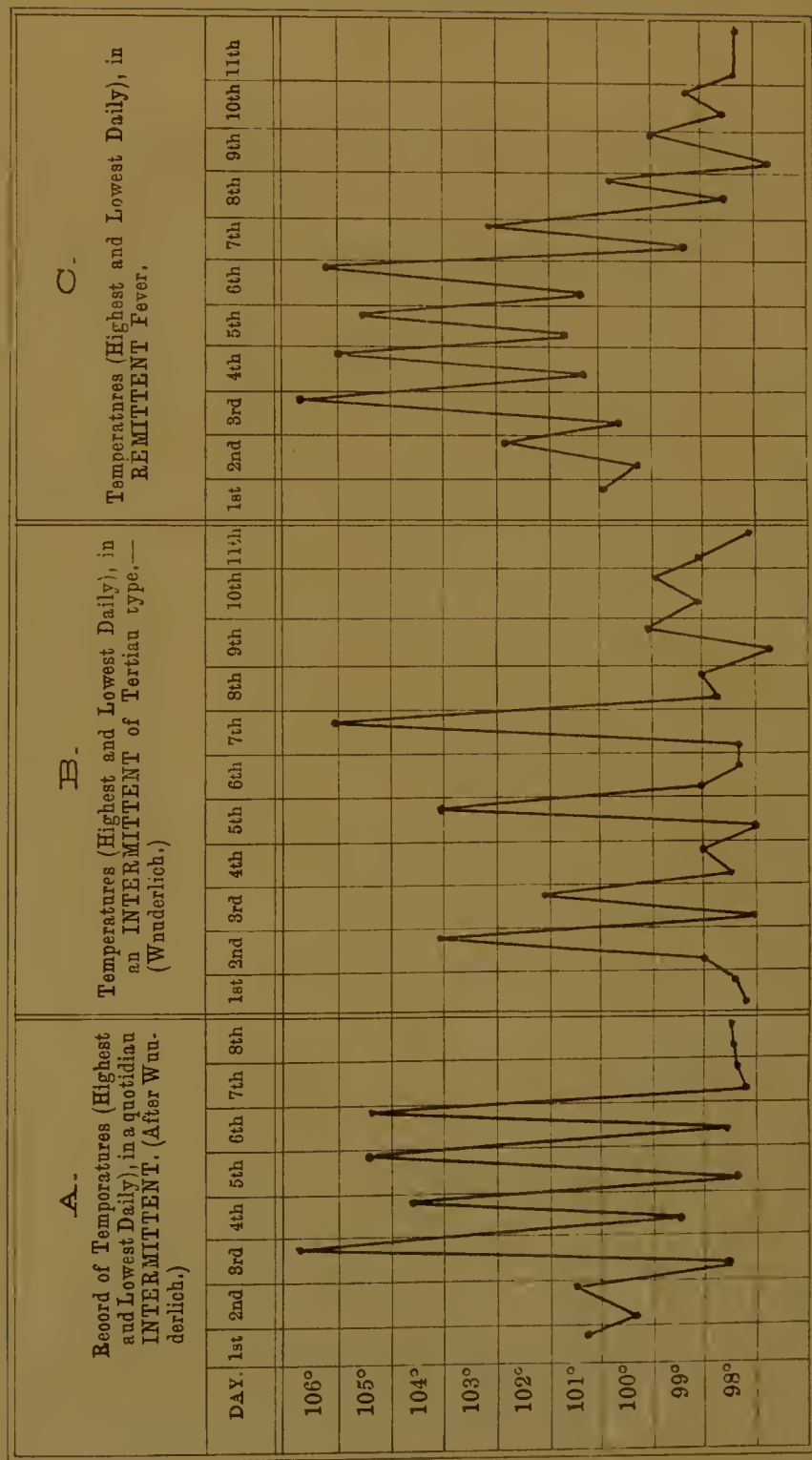
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D.

Typical Temperatures in TYPHOID FEVER,  
taken Morning and Evening.—(Wunderlich & Traube).





# CLASSIFIED LIST OF REMEDIES

MENTIONED IN PRECEDING PAGES, WITH ADDITIONAL  
SUGGESTIONS FOR THE

## MEDICINE CHEST.

NAME.	PROPERTIES.	REMARKS.
<b>ACONITE</b> (Valoid Fl. Ext.)	Lowers pulse, produces sweating, and relieves facial neuralgia.	In all inflammatory disorders, sore throat, fevers, it may be given in doses of $\frac{1}{8}$ to 1 drop in water; may be added to fever mixture; locally it relieves neuralgia, earache, etc.
<b>AMMONIUM CARBONATE</b>	Stimulant and Alkali	Very soluble in water, neutralizes acid in stomach in doses of 5 grains one hour before meals; useful in states of exhaustion, 5 grains every hour or two. It may be used as a local application in insect bites, and injected in strong solution hypodermically in snake-bite.
<b>AMMON. CHLOR. TABLOIDS</b> 5 grs.	In congestion of liver, neuralgia, and headache	For bronchitis, or bronchial catarrh, one of the small Tabloids may be allowed to dissolve slowly in the mouth, every two or three hours. In neuralgia ten to thirty grains may be given three or four times a day with half a wineglass of water. Used in biliousness.
<b>ANTI-CHOLERA TABLOIDS</b> — (Cotoin $\frac{1}{2}$ gr., Cocaine $\frac{1}{10}$ gr., Calomel $\frac{1}{10}$ gr., Myrrh 1 gr., Capsicum $\frac{1}{50}$ gr., Camphor $\frac{1}{6}$ gr.)	The most recent and successful treatment of Cholera, Diarrhœa, etc. Opium may also be given in the first stage of cholera.	Dose—One every 15 or 30 minutes in water, according to urgency of the symptoms, until vomiting ceases. They may be first crushed if so desired. Use alone in the 2nd stage, and in collapse stage inject Corrosive Sublimate $\frac{1}{20}$ gr. and Cocaine $\frac{1}{6}$ gr.
<b>ANTIPYRIN</b>	Febrifuge. Most successful in headache from any cause.	Fifteen or 20 grains taken before temperature reaches 100° will often break up hot stage of intermittent fever. Effects last many hours. Second (daily) dose should be less. Sometimes nauseates on empty stomach. Relieves pain of rheumatism (acute), and painful menstruation.
<b>ARSENIC TABLOIDS</b> , 1/50 gr.	Tonic and anti-malarial, anti-neuralgic.	Poison in large doses. Best in combination with other tonics. Useful in sequences of malarial fever, neuralgia, enlarged liver and spleen, and chronic indigestion.
<b>ATROPIN</b> (See Hypodermic Tabloids)	Anti-neuralgic, anodyne and febrifuge (Poison.)	Dose should be seldom more than $\frac{1}{100}$ grain. Specific effects known by dilated pupil of eye, flushed face, and dry throat. Must not be often repeated in one day.
<b>BI-CARBONATE OF SODA TABLOIDS</b>	Useful in all cases requiring an anti-acid.	The value of alkalies, and especially of the bi-carbonates of Soda and Potash, is very fully understood. In a very large class of cases, indigestion, flatulence, heartburn, and colic are due to an excess of acid in the stomach; and this condition usually constitutes an important element in gout, rheumatism, and gravel.

NAME.	PROPERTIES.	REMARKS.
<b>BISMUTH SUBNIT. TABLOIDS, 5 grs.</b>	Tonic, anti-nauseant, local stimulant	Very useful in acid stomach, heartburn, weak digestion, diarrhœa and dysentery. May be sprinkled on raw and ulcerated surfaces. Large doses harmless.
<b>BUCHU (Valoid Fl. Ext.)</b>	Diuretic .....	Used chiefly for its action on the urinary organs, as in catarrh of the bladder, and irritable conditions of the parts. Dose— $\frac{1}{2}$ to 2 teaspoonfuls.
<b>CALOMEL</b>	Alternative and stimulant to abdominal glands	This is alternative, purgative, and in large doses sedative. It produces biliary stools. One-sixth grain every 30 minutes relieves nausea, and in dropsy acts on the kidneys. It is especially useful in bilious and malarial conditions as a purgative. Employed as an ointment in skin diseases. Dose—One to five grains.
<b>CALOMEL WITH PIPERINE</b>	Alternative and stimulant to abdominal glands	Remarkable stimulant of stomach in cholera. Useful in chronic dysentery, in lessening mucous discharges.
<b>CALOMEL WITH IPECAC.</b>	Alternative and stimulant to abdominal glands	Less stimulating than the preceding, and more laxative. Appropriate to acute forms of Dysentery.
<b>CANTHARIDAL COLLODION</b>	Blistering fluid ....	To be painted on very lightly with a feather when simple counter irritation is required. When it is desired to raise a blister, paint on two applications the size of blister required and apply a poultice over the application.
<b>CARBOLIC ACID, 90 % (Saturated Solution)</b>	Caustic, stimulant, local anodyne, anti-nauseant, antiseptic	A drop or two (strong) injected into a snake-bite may neutralize poison. A teaspoonful in a "night stool" will disinfect contents. One drop may be taken in 2 tablespoonfuls of water for nausea, or fermentation in stomach. Dilute with 30 parts of water, to apply to insect bites.
<b>CASCARA SAGRADA TABLOIDS 2 gr. Extract in each.</b>	Cascara is a tonic aperient, much prescribed in constipation; it does not gripe or irritate the stomach	Dose—One or more Tabloids swallowed with water.
<b>CASTOR OIL</b>	Laxative .....	Is unirritating, and most sure to cleanse out bowels of all disturbing matters quickly. Take a mouthful of lemon juice before and after the dose.—Dose Two tablespoonfuls for speedy action.
<b>CATHARTIC, COMPOUND, U.S.P.</b>	Cathartic (mercurial)	One of the most certain of cathartics, having "antibilious" properties.
<b>CHLORAL HYDRATE</b>	Hypnotic and antispasmodic	Ten grains (rarely 20) will induce refreshing sleep. Dissolved in plenty of water, in 10 grain doses, it has been injected under the skin for cramps in cholera.
<b>CHLORODYNE</b>	Five to 15 drops ....	To relieve any internal pain; given in cholera in early stages, diarrhœa, dysentery, cramp, colic, etc.
<b>CHLOR. POT. &amp; BORAX TABLOIDS</b>	.....	Used in affections of mucous membrane of mouth, and for voice and throat. Should be slowly dissolved in the mouth as often as required.
<b>CITRIC ACID</b>	Antiseptic, refrigerant, diuretic	This is very agreeable. Ten grains to half-teaspoonful may be dissolved in a glass of sweetened water.

NAME.	PROPERTIES.	REMARKS.
<b>COLCHICUM</b> (Valoid Fl. Ext.)	.....	Considered a specific remedy for acute gout, and all forms of disease occurring in gouty subjects. Dose—Two to five drops.
<b>COLLODION</b>	For cuts, etc., as a protective dressing	It quickly dries, forming a thin film over the part on which it is painted.
<b>COMPRESSED CAMPHOR</b>	Diffusible stimulant	May be given in fainting, exhausted conditions, and depression. Used in water for sponging surface of body. Useful in diarrhoea. To make Essence: dissolve 1 part camphor in 9 of rectified spirit, or whisky. Dose.—Ten to 30 minims.
<b>CREAM OF TAR-TAR</b> (Bitartrate of Potash)	Refrigerant, diuretic	For adding to drinking water. When pure, a teaspoonful added to a glass of lemonade or water acts on the kidneys. A tablespoonful will operate on the bowels. Must be stirred, not being readily soluble. Not to be used during diarrhoea or typhoid fever.
<b>DIALYSED IRON</b>	Antidote to Arsenical poisoning Restorative & blood tonic.	This is indicated wherever the patient is pale and weak. It is especially serviceable in heart disease, Bright's disease, female derangements, diphtheria, and all wasting conditions. Invaluable in arsenical poisoning. Dose.—Ten drops five times daily, in water or other liquid, or on a lump of sugar.
<b>DOVER'S POWDER</b> (Opium & Ipecac.)	Sedative (opiate), anodyne, sudorific	Very useful in abdominal pain, diarrhoea, etc. Well borne in fevers as a sedative, as it induces perspiration. Often breaks up cold in the head, with quinine (gr. v.)
<b>ERGOT</b> (Valoid Fl. Ext.)	Hæmostatic, contracts womb	Ergot is used to check hæmorrhage from the lungs, nose, womb, etc., and to induce contraction of the womb before and after delivery. It is also given in diabetes insipidus, in which the arteries of the kidneys are dilated. Dose.—From ten drops to a teaspoonful.
<b>EUCALYPTINE</b>	Antiseptic, anti-malarial, local stimulant	A useful application to bruises, wounds, and venomous bites. Said to be "good in intermittent fevers in doses of 5 or 10 drops four times a day, when quinine has failed. Also recommended for flatulence, chronic cough, and chronic affections of the bladder.
<b>GLAUBER'S SALT</b> (Sulphate Soda)	Refrigerant laxative	Quick and efficient in emptying the large bowel. Dose.—One heaping teaspoonful in a full glass of water in the morning. Much more may be taken. Not to be used in diarrhoeal tendencies.
<b>GLYCERINE</b>	Solvent, local sedative	Added to water, it soothes inflamed surfaces, as skin, rectum, throat, and even stomach in dyspepsia. Excellent vehicle for turpentine. Very rarely it does not agree with skin.
<b>HAZELINE</b>	Anodyne (local), styptic, sedative, refrigerant	Useful as an injection, or local application in dysentery and piles, or applied to bruised surfaces upon feet or elsewhere. Diluted with equal parts of warm water, it soothes in inflammation of eyes and catarrhal troubles. For internal hæmorrhages, a teaspoonful may be given with water every hour.



NAME.	PROPERTIES.	REMARKS.
<b>IODINE CRYSTALS</b>	Alterative, resol- vent, counter- irritant	Tincture is largely used, in full strength, as an injection into bites of venomous serpents. To make Tincture, dissolve 12 grains in 1 oz. of spirit.
<b>ODOFORM</b>	.....	Used principally as an application to ulcers, for which it is excellent. May be applied in powder or ointment.
<b>IPECACUANHA</b>	Emetic, expectorant, anti-dysenteric	Twenty grains, repeated every twenty minutes, will cause vomiting. Stomach soon acquires tolerance of it. Tropical dysentery is much relieved by large doses of it preceded by opium. As an expectorant for coughs, 2 grains ( $\frac{1}{2}$ of one Tabloid) every four hours.
<b>LANOLINE</b>	Basis for ointments	Largely employed in affections of the skin, various medicinal agents being incorporated with it.
<b>"LAXATIVES"</b>	Mild laxative (non- mercurial)	Very useful where powerful cathartics are contraindicated. Prescribed for biliousness, headache, indigestion, costiveness, rheumatism. Dose—One to three. They do not gripe.
<b>LEAD AND OPIUM TABLOIDS</b>	Anodyne and as- tringent	In obstinate diarrhœa or dysentery. One every six hours.
<b>LIVINGSTONE'S ROUSERS</b>	Cathartic, antiper- iodic	A celebrated remedy when first warnings of malarial fevers have appeared.
<b>MERCURY, RED IODIDE OF</b>	Local irritant and resolvent	As an ointment, (13 grains to the ounce of lanoline or lard), it is very useful over enlarged liver or spleen.
<b>MORPHINE, 18 gr.</b> (See Leaflet on <i>Hypodermics</i> )	Anodyne, sedative	For every kind of pain, it may be given by mouth, hypodermically, or by enema; it is useful for diarrhœa and dysentery, and nervous disorders from sunstroke. Very soluble in water.
<b>MUSTARD</b>	Rubefacient.....	As an emetic, take one teaspoonful stirred in a glass of warm water. It is used as a plaster over the stomach for nausea, or for pain, or as a stimulant over neck and spine in cholera, or as a relief for congested lungs.
<b>NUX VOMICA (Valoid Fl. Ext.)</b>	Nerve tonic, cere- bral stimulant	Used for pain in stomach, mental depression, muscular exhaustion, and nervous debility.
<b>OPIUM AND CAMPHOR</b>	Anodyne, stimulant, astringent	Most useful in diarrhœa, of a bilious character, and in chronic, not acute, dysentery.
<b>OPIUM TABLOIDS 1 gr.</b>	Anodyne, astringent narcotic	These will relieve all kinds of pain. The dose is from one to three tabloids, which should not be repeated oftener than every hour before pain is relieved, and every three hours after it is relieved.
<b>PEPTONIC TABLETS</b>	Digestive .....	Prescribed in indigestion, flatulence, dyspeptic headaches, etc. Dose.—One Tabloid after meals. Recommended after food when the stomach is enfeebled in cholera, wasting diseases, fever, etc.
<b>PEPTONIZING POWDERS (Falchild)</b>	Digestive .....	Employed to predigest milk for patients in fevers and diseases of bowels. Milk thus peptonized cannot curdle, and is ready for immediate absorption.



NAME.	PROPERTIES.	REMARKS.
<b>PILOCARPINE,</b> 1/10 gr. (See Leaflet on Hypodermics.)	Sudorific, febrifuge	For hypodermic use, though it can be given by mouth. Produces free sweating, and causes free flow of saliva. Breaks up paroxysms of intermittent fever.
<b>POTASS. IODIDE</b> <b>TABLOIDS</b>	Alterative, resolvent, anti-syphilitic	Given in glandular swellings, syphilis, rheumatism, etc.
<b>QUININE</b>	Anti-malarial tonic The taste may be covered by enveloping in tissue paper and swallowing with water.	Cures all malarial fevers. Is considered an excellent preventive. Admirable tonic in combination with other remedies.
<b>QUIN., ARSENIC,</b> <b>&amp; STRYCHNINE</b>	Anti-malarial tonic	Powerful tonic in convalescence from malarial fevers, and in debility. Acts better when bowels are not confined.
<b>RHUBARB AND</b> <b>SODA</b>	.....	An excellent cathartic, producing natural movements. Good to clear bowels in beginning of diarrhoea, and for children.
<b>SACCHARIN</b> <b>TABLOIDS</b> 1/2 grain each.	They possess 300 times the sweetening power of sugar, and are especially useful for diabetic patients.	One of the Tabloids is sufficient to sweeten a cup of tea or coffee. May be used in preparing foods instead of sugar. Are neither food nor medicine.
<b>SODA-MINT</b>	Carminative, anti-acid	Excellent for acid and flatulent stomach.
<b>SODA SALICYLATE</b> <b>TABLOIDS</b>	Anti-pyretic.....	Prescribed in acute articular rheumatism and to lower temperature in fevers. Dose.—One to three. Used for rheumatism, typhoid fever, pyæmia, septicæmia, puerperal fever, quinsy and diphtheria. Dose 1 to 3 3-gr. Tabloids.
<b>SULPHURIC ACID</b> (Handle with Caution.)	.....	For medicinal purposes, dilute ½ drachm of this with one-third pint of water; do not use till it cools and settles.
<b>TANNIN</b>	Astringent .....	Most valuable in internal hæmorrhages from lungs, bladder and bowels. Ten grains every hour or two.
<b>TINCTURE MUR.</b> <b>IRON</b>	.....	Prescribed largely in diphtheria, anæmia, chronic diarrhoea, erysipelas, and externally to stop hæmorrhage.—Dose 10 to 30 drops in a little water.
<b>TURPENTINE</b> (Rectified)	Balsamic, stimulant	Requisite for the inflamed glands of the bowels in typhoid fever. May be used externally like mustard plaster on flannels wrung out of hot water. Sometimes affects bladder.
<b>WARBURG'S</b> <b>TINCTURE</b>	Anti-malarial .....	Noted remedy for breaking up malarial fever. Consists of quinine and strong spices.
<b>WHISKEY</b>	Stimulant.....	Given hypodermically in collapse of cholera, or depressed stage of fevers, in typhoid fevers and heat exhaustion; also used in food preparations, as milk punch, "egg nog," &c.
<b>ZINC SULPHATE</b>	.....	Useful as an eye-water, 1 gr. to ounce of water, and for leucorrhœa and gonorrhœa.
<b>ZYMINE</b> (Fairchild)	Digestive .....	For predigesting different foods for invalids and infants.

NOTE.—The Tabloids of Bicarbonate of Soda will be found most useful in peptonizing foods with Zymine.

*Hypodermic medication should ordinarily be conducted by a Physician, or under a Physician's instruction.*

## Hypodermic Medication.

NOTES ON ALKALOIDS, BY A PHYSICIAN.\*

(THE TABLOIDS MAY BE GIVEN BY THE MOUTH AS WELL AS HYPODERMICALLY).

ACONITIN TABLOIDS, 1/260 & 1/130 Gr.

Aconitin is specially effective in facial neuralgia. One of the tabloids may be quickly incorporated with a little Lanoline, and rubbed into the skin over the painful part, or applied "for itching and pain," whether due to neuralgia or inflammation. Aconitin is prescribed in "toothache," intercostal neuralgia, and neuralgia accompanying shingles. It may be dissolved in water and painted on the part. It is intensely powerful, and *should seldom if ever be injected hypodermically.*

ALOID TABLOIDS, 1/4 Gr.

Aloid is an excellent agent to unload a congested liver.

APOMORPHINE TABLOIDS, 1/10 Gr.

Apomorphine "is the most useful of all the emetics for narcotic poisoning" (Bartholow). "Its action is not followed by nausea or prostration" (Whitla), and it is very useful in a stomach loaded with indigestible food. Rossbach says of it in inflammations, "It is only since I learned the excellent effects of apomorphine that I can say I really like to treat catarrhs even of the most obstinate kind, and no longer, as before, approach the cases with a sense of therapeutic powerlessness." In a child or an inebriate a very large dose may cause unpleasant symptoms.

ATROPIN TABLOIDS, 1/150, 1/100 & 1/60 Gr.

\* \* \* "The principal triumphs of atropin over neuralgia have been in cases of *sciatica*. It is now admitted that atropin is one of the *best remedies for this disease*" (Bartholow), but to obtain the best results the fluid should be *injected deeply* into the neighbourhood of the affected nerve near the buttock. *For pelvic pains Anstie has shown that hypodermics of atropin are unequalled.* In the night sweats of consumption, etc., a few injections are often so efficient as to render further treatment unnecessary (Murrell). The drug is highly spoken of in asthma. "*That troublesome disorder, spermatorrhœa, is most successfully treated by the hypodermic injection of atropin*" (Bartholow). It is also recommended in sea-sickness and ptialism. Flaxen-haired women are specially susceptible to atropin.

CAFFEIN TABLOIDS, 1/2 Gr.

Caffein has been much used hypodermically in malarial neuralgia. It has been given hypodermically with success in hysterical headache (Lorent), and the sleeplessness (insomnia) of chronic alcoholism without delirium (Anstie). It sometimes relieves nervous headaches in a marvellous manner (H. C. Wood). It is a powerful diuretic in dropsy.

COCAINE TABLOIDS,  $1/10$ ,  $1/6$  &  $1/2$  Gr.

"One-quarter of a grain of Cocaine injected into the neighbourhood of buboes, inflamed bursæ, small tumours, abscesses. etc., permits them to be painlessly dealt with" (Whitla). A solution in the eye of  $\frac{1}{2}$  gr. of Cocaine to 12 minims of water will allow an operation for cataract, and a solution of 1 gr. to every four drops, painted twice on the nasal mucous surface, permits the application of the actual cautery without pain.

A very excellent way is to incorporate one or more tabloids in Linoline, and rub it into the skin, when it soon removes sensibility.

"Cocaine solutions are liable to change, and a fungoid growth is apt to appear in them" (*Medical Annual*). The Hypodermic Tabloids are stable. One of them introduced into the cavity of an aching tooth will relieve the pain effectually.

CODEIN HYPODERMIC TABLOIDS  $1/2$  gr.

As codein expends its force upon the nerves of the viscera, whose irritability it lessens in a remarkable degree, "it has been given with advantage in sleeplessness caused by pain in some paripheral regions, and in nausea, where 2 to 4 grains may be given every 4 or 6 hours till sleep is produced" (Whitla). "It has been strongly recommended in nervous insomnia, and also in cases where sleep is prevented by the pain of rheumatism or cancer, or by distressing cough" (Brunton). It is a great remedy for diabetes.

COLCHICINE TABLOIDS,  $1/100$  Gr.

For gout, rheumatism, etc. (See "Practitioner," Vol. xxiii., p. 400).

CURARE TABLOIDS,  $1/12$  &  $1/6$  Gr.

For hydrophobia, convulsions, tetanus, chorea, strychnine poisoning, paralysis of motor nerves. NOTE.—It will be observed that this drug is only to be used in certain extreme cases.

DIGITALIN TABLOIDS,  $1/100$  Gr.

"The two most marked effects of digitalis are a *reduction in the rate of the pulse and an increase in the amount of urine*" (Brunton). "The irregularity of the pulse is the capital indication of the necessity of giving digitalis" (Ringer). "If no dropsy be present, digitalis will not notably increase the quantity of urine" (Phillips).

ERGOTININ TABLOIDS,  $1/150$  &  $1/300$  Gr.

Prof. Ealenberg says of the Ergotin in these Tabloids:—"I administered it in vaso-motor neuroses, special cephalgiæ, hemicrania, Basedow's disease, and in cases of paralysis of the bladder. I can say this much: that subcutaneous injections of your Ergotin in doses of  $1/300$  to  $1/60$  of a grain show great advantage over the injections of Extract of Ergot." Dr. Murrell found that in hæmorrhages from the lungs in consumption one injection usually sufficed to check the bleeding for four days.

M. Tarnier states that the results of the hypodermic injection of Ergotin were so favourable in the Maternité de Paris, as to give the drug absolute precedence over Ergotine.

## HOMATROPIN.

(Oxytoluyllic-acid-tropine).

According to Fronmüller (Memorabilien, 1880, p. 298, 1882, p. 6.) homatropin is devoid of the toxic principles of atropin, but Ringer finds that like atropin, it paralyzes and tetanizes; a two per cent. solution is said to quickly dilate the pupil, which regains the normal size within twenty-four hours. It is also unirritating. By it "cough, expectoration and insomnia are relieved" (Currie), but in general diseases it is not so useful as atropin.

## HYDRARG. PERCHLOR. TABLOIDS, 1/60 &amp; 1/130 Gr.

(Corrosive Sublimate).

This is "the preparation of mercury that has especially been employed subcutaneously, and usually in aqueous solution, on account of its solubility" (Ziemssen's *Therapeutics*). It has been employed considerably in syphilis. Where it is desired "to produce a local caustic action," a strong solution must naturally be used: *e.g.*, "Bienfait of Rheims used in the carbuncles of anthrax (as an injection into the œdematous eyelids) an alcoholic solution of 1 to 5; Luton, some drops of an alcoholic solution of 1 to 30; Dominguez, 20 to 80 drops of a 10 per cent. solution in elephantiasis Græcorum" (Ibid). As much as 1/6 gr. is said to be an ordinary dose by some German authorities, though this certainly seems *excessive*. The usual dose by the mouth is 1/16 gr.

## HYOSCYAMIN TABLOIDS, 1/80 &amp; 1/10 Gr.

In psychoses (mental affections) with high motor excitement, Hyoscyamin is "the most rapid and reliable narcotic we possess" (Prideaux). "It produces sleep in mania more certainly even than chloral, and without bad after-effects" (Seguin). According to Oulmont it "cures nervous trembling when all other treatment has failed." "It is valuable during dentition and in convulsions, its properties being such as alleviate pain and subdue irritation" (Phillips). It is given to induce sleep when opium disagrees, and does not constipate (Ringer). It is highly praised as an antispasmodic (Oulmont). (1/10 gr. is an exceptional dose).

## HYOSCINE TABLOIDS (1/200 and 1/75.)

"Hyoscine, the second alkaloid of Hyoscyamus, is a powerful cerebral sedative. "It is of great service in the treatment of delirium, excitement and insomnia, alike in insanity and other diseases" (Currie), proving useful in the delirium of pneumonia, cardiac and renal disease, epileptiform convulsions and chorea.

## MORPHINE TABLOIDS (1/8 gr.)

To produce sleep or relieve pain morphine is the most powerful agent we possess, and has been called the "gift of the gods." The dose settled upon should not be repeated sooner than in twenty minutes. In cases of neuralgia one hypodermic injection of morphine will often effect a cure.

## PHYSOSTIGMINE (ESERINE) TABLOIDS, 1/100 Gr.

(THE SALICYLATE.)

Dr. Von Wecker states that Eserine is a most powerful antiseptic, preventing the formation of pus in suppurative diseases of the cornea, and after cataract operations when the cornea or iris shows a tendency



to suppuration. It is recommended in presbyopia (far sightedness) ocular neuralgia, and painful corneal ulcers and wounds. As it lessens intraocular tension, it is used in glaucoma \* and staphyloma. †

"It removes dilatation of the pupil and paralysis of accommodation, after the use of atropin, and used alternately with atropin, breaks down adhesions after iritis" (Brunton). It is prescribed in tetanus, (spasmodic contractions of voluntary muscles), strychnine and atropin poisoning, general paralysis of the insane (Crichton Brown) and mania; in paraplegia, and locomotor ataxia (Brunton); in constipation due to intestinal muscular atony, and in bronchitis, catarrh, and dyspnoea due to bronchial weakness (Ringer). It is given in chorea, and the night-sweats of consumption.

#### PILOCARPINE TABLOIDS, 1/10, 1/3 & 1/2 Gr.

The effects of Pilocarpin in solution are not so constant as when injected (Whitla). So powerful and certain is its diaphoretic action, that it has already taken rank as the most reliable and influential of the remedies of its class (H. C. Wood). It may be rubbed into the skin with Lanoline to produce local sweating. It often shortens the hot stage of intermittent fever, and is of great service in puerperal albuminuri; it frequently averts a cold.

#### QUININE TABLOIDS (SOLUBLE).

Quinine has often been given subcutaneously in sunstroke and topical fevers. Injections of it are apt to prove somewhat irritating, but where they are indicated these Tabloids will be found the most eligible preparation there is.

#### STRYCHNINE SULPHATE TABLOIDS.

1/150, 1/100 & 1/60 Gr.

In cases of paralysis, to "be capable of regenerating at once the lost muscular power," "Strychnine must be administered hypodermically." It should not be administered in acute but in chronic cases only. It is useful in gastralgia, paralysis of the bladder, etc.

#### SCLEROTINIC ACID TABLOIDS, 1/2 & 1 Gr.

(ACTIVE PRINCIPLE OF ERGOT.)

According to M Marckwald, Sclerotic Acid acts more violently on the uterus than Ergotin, and lowers arterial pressure.

"In mammals the acid accelerates the intestinal peristalsis, and excites contraction both of the pregnant and non-pregnant uterus, pre-existing contractions being intensified so that the organ assumes a paler tint. Nitikin has not observed any poisonous effect on the foetus in utero. . . . It is a much less powerful poison than most of our official alkaloids" (MEDICAL TIMES & GAZETTE, Dec. 6th 1876).

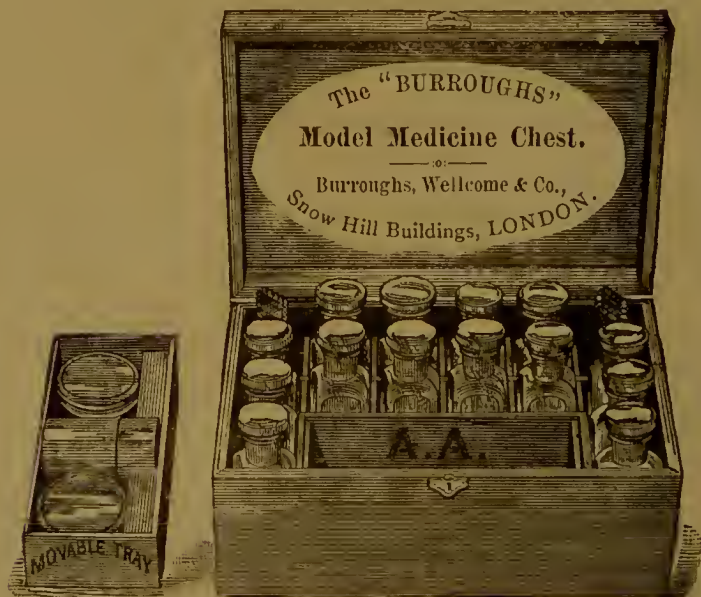
Sclerotic (or Sclerotic) Acid contains Ergotinic Acid.

\* Glaucoma [from the Greek γλαυκός, "bluegreen," also light gray] is defective vision from opacity of vitreous humour (or the liquid contents of the eye). "It is properly applied to all the conditions which are produced by heightened arterial tension or increased fluid pressure within the eyeball" (Thomas).

† Staphyloma [from the Greek σταφυλή, a "grape,"] a disease of the eyeball, in which the cornea loses its transparency, rises, and even projects beyond the eyelids like a small tumour, somewhat resembling a grape (Ibid).

**No 17.—POCKET CASE.**

Flexible, fine Calf, two pockets, containing sixteen 3-dram vials.  
 PRICE—Empty, 15/-; filled with good assortment and "Travellers'  
 Guide," 25/-.

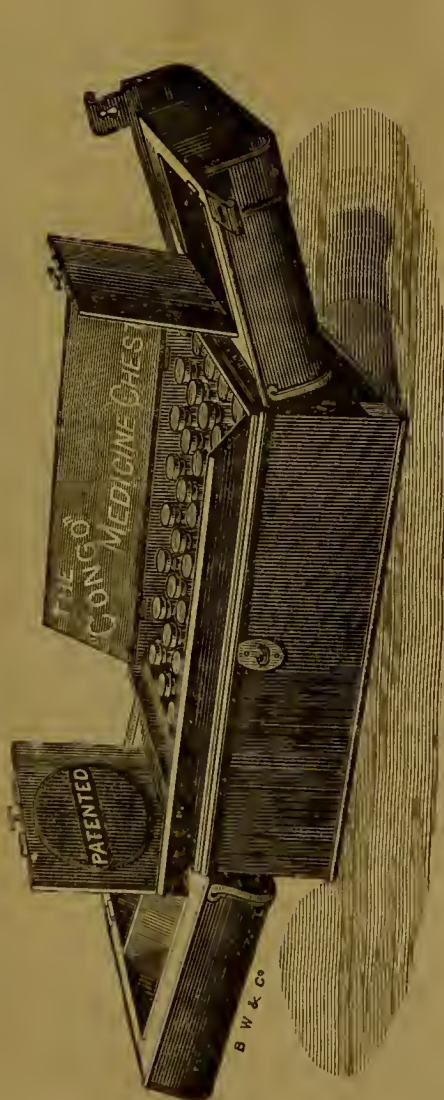
**"MODEL" MEDICINE CHEST.**

Polished Mahogany, very handsome, containing fourteen 2-oz.  
 stoppered bottles, two stoppered blue bottles for poisons, two ointment  
 jars, powder boxes, measuring glass, and space for sundries. PRICE—  
 Fitted complete and with "Travellers' Guide," 80/-; chest and bottles  
 only, 25/-.

30/-



# **"CONGO" MEDICINE CHEST.**



Strong Metal, containing forty 2-ounce bottles, in moveable wooden tray with covers; fitted with partitions for instruments, etc. Size: 16 by 11 by 9 in. PRICE—Without medicines ~~50/-~~ 60/- With compressed and other medicines, instruments and "Travellers' Medical Guide," etc., £7 to £20. Weight of Chest about 40 lbs.

The "Congo" Medicine Chest is also supplied in either leather or teak-wood as may be desired.

**"GORDON" MEDICINE CHEST.**

This is a beautiful, compact and durable medicine case, containing 12 bottles filled with Tabloids of compressed drugs, etc., for immediate use. They obviate the possibility of the mistakes incident to weighing and measuring, as they are compressed or otherwise prepared in uniform doses. PRICE—<sup>12/-</sup>10/6. Large size, <sup>15/-</sup>15/-, with "Guide."

**No. 19.—CARRIAGE OR HAND BAG.**

Morocco. Very compact and well protected, containing eight  $1\frac{1}{2}$ -oz. stoppered, ten 1-oz., twelve 6-dram, eight 4-dram, and ten 2-dram corked vials. The rows of vials are arranged to fall and show all the labels. Size,  $11\frac{1}{2}$  by  $5\frac{1}{4}$  by 6 inches. PRICE—Empty, ~~42/-~~ 42/-; filled, <sup>from</sup> 80/-, with "Guide." 60/-

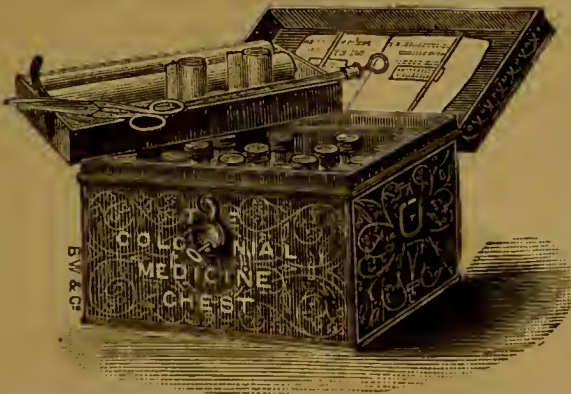
**"LIVINGSTONE" MEDICINE CHEST.**

Raw Hide, containing twelve 2 oz. or 4 oz. bottles. Fitted with leather strap for convenience of carrying. Very suitable for missionaries and travellers. Size: 11 by 7 by 4 inches. Price—Empty, ~~29/6~~ 30/- Fitted with medicines, instruments and "Guide," *£3. from*

**"COLONIAL" MEDICINE CHEST.**

(ORNAMENTED METAL OR TEAK WOOD).

Missionaries' Teak-wood  
Medicine Chest.



Furnished Complete, 70s.  
For Stations and Expeditions.

This is especially designed for emergencies and family use. Besides being furnished with 16 one and a half ounce bottles, and 4 three-quarter ounce bottles containing compressed and other drugs—those most commonly required by physicians and families—it has surgeons' bandages, scissors, needles and silk, adhesive, court and mustard plasters, catheter, absorbent cotton, wound pad, etc. For physicians, missionaries, travellers, explorers, and use on board ship, these chests will be found to fill many an important want. PRICE—Fitted complete, 60/-; Chest and bottles only, ~~75/-~~ 12/-

NOTE.—All the Medicine Cases and Chests can be fitted with Tabloids of compressed drugs, etc., according to order. Any of the above may be ordered of Burroughs, Wellcome & Co., Snow Hill Buildings, London, or through any chemist or wholesale druggist.

## Extract from "The Congo Free State."

By HENRY M. STANLEY.

"Observe the strictest temperance. Drop all thought of tonics, according to the rules of 'west coasters,' 'old traders,' 'African travellers,' or your own self-deceiving fancies. If you are in absolute need of a tonic apply to the doctor, or to the simple rule of never during daylight taking more than one ounce of any liquor or wine. Your best tonic would be 2 grains of quinine as compressed in Tablets by Burroughs & Wellcome, of Snow Hill Buildings, London. These chemists have prepared drugs which I can conscientiously recommend as adapted for tropical regions. They have prepared small doses in tablets of nearly every medicine that may be required, which may be taken without creating nausea, a valuable desideratum, as all will admit who have suffered from the foul nauseating smell of medicines as commonly prepared by druggists. If thirsty, at a station or factory, prepare a glass of sherbet. If marching, drop a Compressed Tablet of acidulous powder\* as prepared by these chemists, in your cup of water."

\* \* \* \* \*

"Obtain your medicine pure and well-prepared. Messrs. Burroughs & Wellcome will equip you with tropic medicines in chests or cases, with supplies to last you one month or ten years. They have sought the best medical advice, and really seem disposed to study the special needs of the East, West, Central, Northern, or Southern African traveller, soldier, trader and missionary. I have informed them of a few diseases such as have fallen under my observation, and they have prepared such medicines as have been tried during the last seventeen years of my African experiences."

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\* Citric or Tartaric Acid or Cream of Tartar answers same purpose.

